SOMERVILLE CITY HALL

CPA FUNDING APPLICATION PACKET

City of Somerville

Capital Projects and Planning Department

Stephen Vitello, Project Manager – 12/1/14

GENERAL

- **Cover Page**
- **Checklist**
- **Narratives**
- **Timeline**

JOSEPH A. CURTATONE
MAYOR

Somerville CPA

Open Space | Affordable Housing | Historic Preservation | Recreation

CITY OF SOMERVILLE, MASSACHUSETTS
COMMUNITY PRESERVATION COMMITTEE
FY15 FUNDING APPLICATION
COVER PAGE

1. PROJECT INFORMATION

PROJECT NAME: Somerville City Hall Renovation - (Design and Construction Management)

PROJECT LOCATION: 93 Highland Avenue

LEGAL PROPERTY OWNER OF RECORD: City of Somerville

ONE SENTENCE DESCRIPTION OF PROJECT: Restore exterior building elements, upgrade mechanical systems, upgrade life safety and handicapped accessibility.

Please indicate (X) the approved category(s) from your Eligibility Determination Form.

			■	
			X	
	■	■	■	
			X	

ESTIMATED START DATE: 8/15/15

ESTIMATED COMPLETION DATE: 12/1/15

CPA FUNDING REQUEST: $600,000

TOTAL BUDGET FOR PROJECT: $623,400

2. APPLICANT INFORMATION

APPLICATION NAME / ORGANIZATION: Stephen Vitello - Somerville Capital Projects and Planning Dept.

CO-APPLICATION NAME / ORGANIZATION:

CONTACT PERSON: Stephen Vitello - Project Manager

MAILING ADDRESS: 1 Franey Rd. Somerville, MA 02145

PHONE: 857-523-1086 EMAIL: svitello@somervillema.gov

3. SIGNATURES

I (we) certify that all information provided in this entire submission is true and correct to the best of my (our) knowledge and that no information which might reasonably affect funding has been excluded. I (we) authorize the Community Preservation Committee and/or the City of Somerville to obtain verification from any source provided.

Name (printed) STEVE VITELLO Signature [signature] Date 12-1-14

Name (printed) _____ Signature _____ Date _____

FOR CPC USE: Date Received _____ Date Reviewed _____ Date Applicant Notified _____

Somerville CPA

Open Space | Affordable Housing | Historic Preservation | Recreation

JOSEPH A. CURTATONE
MAYOR

CITY OF SOMERVILLE, MASSACHUSETTS
COMMUNITY PRESERVATION COMMITTEE
FY15 FUNDING APPLICATION
SUBMISSION REQUIREMENTS CHECKLIST

Please check (✓) each item included in your submission, which should include the applicable items in the order listed below.

GENERAL:

- [✓] Application Cover Page (form provided)
- [✓] Submission Requirements Checklist (this form)
- [✓] Narratives (prompts provided)
- [✓] Project timeline: a project schedule showing all major milestones (i.e., study, design, environmental, permitting, construction, etc.), including receipt of other funding sources

FINANCIAL:

- [✓] Budget Summary (form provided)
- [✓] Itemized budget of all project costs, including the proposed source for each cost
- [✓] At least two written quotes for project costs. If quotes cannot be secured, detailed cost estimates may be used if a thorough explanation of the estimates is included.
- [ ] Proof of secured funding (e.g., commitment letters or bank statements), if applicable

VISUAL:

- [✓] Map of the property location showing all features pertinent to the project, including current or future rapid transit stations
- [✓] Photos of the project site (not more than 4 views per site); include digital copies

OWNERSHIP/OPERATION (NON-CITY):

- [ ] Documentation of site control or written consent of the property owner to undertake the project, if the owner is not the applicant
- [ ] Certificate of Good Standing from the City, if applicable
- [ ] 501(c)(3) certification, if operating as a non-profit
- [ ] Purchase and sale agreement or copy of current recorded deed, if applicable

COMMUNITY SUPPORT (RECOMMENDED):

- [✓] Letters of support from residents, community groups, other City boards, commissions, or departments, or from City, state, or federal officials

HISTORIC RESOURCES PROJECTS:

- [✓] Documentation that the project is listed on the State Register of Historic Places or a written determination from the Somerville Historic Preservation Commission that the resource is significant in the history, archeology, architecture, or culture of Somerville.
- [✓] Photos documenting the condition of the property
- [✓] Report or condition assessment by a qualified professional describing the current condition of the property, if available.

PLANS AND REPORTS (IF AVAILABLE)

[if available in 8½ x 11, include in the application. If not, include separately, not bound to the application]

- [ ] Renderings, site plans, engineering plans, design and bidding plans, and specifications
- [✓] Applicable reports (e.g., 21E, historic structure report, appraisals, survey plans, feasibility studies). Note: for reports of more than 10 pages, applicant may provide 2 copies, rather than 11.

Somerville City Hall CPA Narrative

Project Description

1. **THE PROJECT**

Somerville City Hall is on the National Register of Historic Places and is located at 93 Highland Avenue. The building is in need of various capital improvements and is suffering from the effects of age, weather, and wear. The City of Somerville commissioned a report documenting the existing conditions and prioritizing capital needs at the property (Attachment A). High priority issues at City Hall are handicapped accessibility, building envelope repairs, and upgrades to mechanical, electrical and life safety systems. The City is requesting $400,000 in CPA funds to engage a design team to develop construction bid documents in order to proceed with the preservation work. On construction projects over $1.5 million, the State of Massachusetts requires that the project have an Owner's Project Manager to monitor the project's budget, schedule, and compliance with specifications. The City is seeking $200,000 for this service, bringing the total CPA request to $600,000.

2. **NEEDS AND BENEFITS**

The project is needed in order to preserve the structural integrity of City Hall and to improve its accessibility, life safety, and building systems so that it can better serve the general public and building staff. A restored City Hall would increase its character as a highly visible central landmark and in turn would increase the City's character.

The success of the project can be measured in part through reduced operating costs, but the project's greater value will take the form of a structure that performs well, shows respect for the general public and employees, and engenders civic pride.

3. **COMPLIANCE WITH CPA PRIORITIES**

CPA Priority 1 – Consistency With Community Values

A. Improve Accessibility For All

City Hall is moderately accessible, but needs upgrades to bring it into full compliance with state and federal accessibility requirements for public buildings. The City of Somerville has been actively working across the city to increase accessibility in and around its buildings. Accessibility upgrades to City Hall would certainly help that effort while better serving the City's customers and employees.

B. Incorporate Sustainable Practices and Design

The design of the capital improvements will include sustainable elements to the greatest extent possible. Our design contracts include this mandate. Mechanical and electrical upgrades would include energy efficient equipment so that operating costs could be reduced and interior comfort enhanced. The city would also take advantage of any relevant utility incentives or rebates associated with boilers, pumps, motors, controls, and lighting.

C. Endorsements

The City Hall Renovations project is supported by the mayor in the Somerville Five Year Capital Improvement Plan and is endorsed by the Somerville Historic Preservation Commission and the Somerville Disabilities Coordinator.

D. Consistency With Other Goals and Priorities

Upgrading City Hall is consistent with the mayor's overall goal of making Somerville a great place to live, work, play, and raise a family. Reducing energy consumption is in line with mayor's stated goal that Somerville be carbon neutral by the year 2050. The project is also in keeping with the city's obligation to its residents to provide responsive and high quality services.

E. Address Two or More CPA Focus Areas

The City Hall Upgrade falls directly in the CPA focus area of Historic Resources. The work would address crucial longstanding needs to alleviate risk to the building's integrity and functionality, while embodying the CPA's general priorities. City Hall sits at one end of the City Hall Concourse. A successful building renovation would relate to the CPA Open Space focus area in that the improved building would enhance its adjacent open space.

CPA Priority 2 – Strategic Use of CPA Funds

A. Leverage Other Funds, Implement Cost-Saving Measures

Should the City be granted CPA funds for design work, we would use them as a catalyst to obtain bond money through a Board of Aldermen vote in order to secure a general contractor to perform the construction.

B. Address Long-Standing or Urgent Needs in the Community

City hall has not had any significant restoration or enhancement in many years. The citizens of Somerville deserve a City Hall that lives up to its potential as a landmark and as a center of service and assembly that is accessible to all.

C. Exceptional, Time-Sensitive Opportunities

Undertaking the City Hall Project at this time would allow the City to take advantage of Somerville's elevated bond rating and favorable interest rates.

D. Catalyst for Transformative Change

Somerville is undergoing change on many levels, including demographics, economics, and infrastructure. One new MBTA station has already opened and several more are scheduled. One of the new stops will be just two blocks away from City Hall. Additionally, the Massachusetts School Building Authority has approved funding for a feasibility study for a new Somerville High School. One possibility is to build a new school in its present location. A restored City Hall would not only enhance the integrity of the building, but of the site as well.

Financial

1. **FUNDING**

The City of Somerville has identified the City Hall Improvements in its Five Year Capital Improvement Plan (CIP). With many competing capital projects, the City is applying for one time CPA support to allow the design of the improvements to move forward while maximizing the ability to fund as many needed capital projects as possible. This will allow the city to request the approval of a bond appropriation from the Board of Aldermen to fund the construction.

2. **DETERMINATION OF AMOUNT REQUESTED**

The attached Existing Conditions Report has identified a scope of work and a budget estimate. That scope does not include the construction of a new boiler room and terrazzo floor restoration, which translates to an estimated construction cost of $4,000,000. Typically design fees on projects of this scope are estimated at roughly ten percent of the projected construction costs, therefore we are requesting $400,000 for design services. Additionally, the Capital Projects and Planning Department has reviewed the Owner's Project Manager's

fees on past and current projects. Based on the scope and anticipated cost of the City Hall improvements, we estimated the OPM fee at $200,000. We are cognizant of the great number of CPA requests for a limited pool of funds and we intend to use CPA funds as a catalyst for implementation of the preservation work.

3. FUNDING REQUIREMENTS

The design and OPM funding will be a one-time request. The City intends to develop a design and a construction estimate which will be used as the basis for a CPA request in 2015 to fund the construction.

Project Management

1. APPLICANT

The applicant is the City of Somerville's Capital Projects and Planning Department (CPPD), which is responsible for the planning and implementation capital improvements to City buildings.

2. PROJECT EXPERIENCE

CPPD has solicited and contracted designers on numerous renovations as well as for new construction of administrative buildings, schools, libraries, recreation centers and public safety buildings. Designer selection criteria for City Hall renovations would emphasize that the firm have significant experience with historic structures and public projects.

3. PARTICIPANTS' ROLES

In order to engage the services of both the designer and the Owner's project manager, the Somerville Capital Projects and Planning Department and Purchasing Department will develop requests for qualifications and undertake the designer selection process in accordance with Chapter 7 of Massachusetts General Law. A designer selection committee comprised of a representative from CPPD, Purchasing, and Historic Preservation will review qualifications and interview candidates, ultimately recommending preferred candidates to the mayor. The Somerville Capital Projects and Planning Department (CPPD) will oversee the designer's and OPM's contracts and milestone submissions.

The designer will be responsible for developing accurate estimates and ultimately a set of buildable and fiscally responsible construction documents. They will be the product of a collaborative process led by the designer to obtain constructive ideas and comments from users, building staff, permitting and safety officials and maintenance staff.

4. **FEASIBILITY**

The design of preservation and improvement measures for Somerville City Hall is feasible. There are several firms in the area with historic preservation experience, and given the high visibility of Somerville City Hall, there should be several applicants. As an example, on a recent designer and OPM solicitation for the renovations to the West Branch Library, twelve qualified design firms submitted proposals.

5. **POTENTIAL BARRIERS**

The Somerville City Hall Design project does not face any known barriers.

6. **ONGOING MAINTENANCE**

The design work does not require actual maintenance. Upon completion of the construction work, the building will be maintained by in-house custodial and maintenance staff, as well as by contracted vendors for various systems such as life safety, elevators, and HVAC. Additionally, City Hall will be placed on a preventive maintenance schedule, in order to avert issues and to keep the building functioning smoothly.

Historic Resources Rehabilitation Projects

1. **COMPLIANCE WITH U.S. SECRETARY OF INTERIOR STANDARDS**

The Somerville City Hall Design project will comply with the U.S. Secretary of the Interior's Standards for Rehabilitation because:

- The property will continue its original and historic use.
- The design will preserve the building's historic character and original features.
- The U.S. Secretary of the Interior Standards for Rehabilitation will be incorporated into the design contract.

CITY HALL RENOVATIONS

PROJECT MILESTONE SCHEDULE

Feasibility Study Complete	11/1/14
CPA Design/Project Manager Award (est.)	5/1/15
Owner's Project Manager (OPM) Award	7/15/15
Designer Award	8/15/15
Construction Documents Complete	12/1/15
Submit 2016 CPA Application for Construction	12/1/15
CPA Construction Award (est.)	5/1/16
Construction Bids Received	6/15/16
Board of Aldermen Funding Approval	8/15/16
Construction Award	9/15/16
Construction Start	10/1/16
Construction Finish	5/1/17

FINANCIAL

- **Budget Summary**
- **Itemized Budget**
- **Cost Estimates**

JOSEPH A. CURTATONE
MAYOR

Somerville CPA

Open Space | Affordable Housing | Historic Preservation | Recreation

CITY OF SOMERVILLE, MASSACHUSETTS
COMMUNITY PRESERVATION COMMITTEE
FY15 FUNDING APPLICATION
BUDGET SUMMARY

PROJECT NAME: Somerville City Hall Renovations - (Design and Project Management Funding)

APPLICANT: City of Somerville - Capital Projects and Planning Department

SUMMARY OF PROJECT COSTS

Please include a complete itemized budget of all project expenses, including the proposed funding source for each expense, in your submission.

	PROPOSED SOURCE	EXPENSES				
		STUDY	SOFT COSTS*	ACQUISITION	CONSTRUCTION**	TOTAL
1	Somerville CPA	$	$600,000	$	$	$600,000
2	Existing Conditions Report	$23,400				$23,400
3						
4						
5						
6						
TOTAL PROJECT COSTS		$23,400	$600,000	$	$	$623,400

*Soft costs include design, professional services, permitting fees, closing costs, legal, etc.
** Construction includes new construction, preservation, rehabilitation, and/or restoration work

EXPLANATION OF FUNDING SOURCES

Please explain the status of each funding source (i.e., submitting application on X date, applied on X date, received award notification on X date, funds on hand, etc.). For sources where funding has been awarded or funds are on hand, please include documentation from the funding source (e.g., commitment letter, bank statement) in application packet

	SOURCE	SECURED? (YES/NO)	STATUS OF FUNDING SOURCE
2	City of Somerville	yes	Secured - Report Complete
3			
4			
5			
6			

CITY HALL RENOVATIONS

Itemized Budget Summary

ITEM	AMOUNT	SOURCE
1. Designer Fees	$400,000	Proposed CPA Funding
2. Owner's Project Manager*	$200,000	Proposed CPA Funding
3. Construction Costs**	$4,000,000	Proposed 2016 CPA Funding
TOTAL	**$4,600,000**	

* City of Somerville Capital Projects and Planning staff will also perform consultant contract oversight and project management duties.

** Soft costs such as relocation, furnishings, and equipment would be funded by the City,

Category 1.

- Equipment or systems that are not presently functioning and require repair or replacement to bring to a functioning state, or
- Equipment or systems highly likely to fail in the upcoming year and require repair or replacement to mitigate a disruption to the buildings use.

Subcategory	Amount
Replace sealants, repair steps and paint railings	$8,000.00
Remove and replace damaged concrete	$7,000.00
Prep and paint wood trim	$325,000.00
Replace sealants	$9,000.00
Replace louvers	$8,000.00
Replace/repair windows	$150,000.00
Replace windows in clock tower	$6,000.00
Paint doors and adjust hardware	$11,000.00
Patch slate roof	$8,000.00
Repair damaged copper coping	$14,000.00
Cyclic maintenance (per year)	$5,000.00
Repairs to curb ramp and sidewalk	$5,000.00
TOTAL	**$556,000.00**

Category 2.

- **Life/safety issues that should be addressed immediately.**

Subcategory	Amount
Repair damaged fire escape	$22,000.00
Replace damaged cross over roof stair	$5,000.00
Replace stair treads and rotting floor at cupola	$6,000.00
Install railings at stairs and provide ladder to clock tower	$5,000.00
Replace louvers	$8,000.00
TOTAL	**$46,000.00**

Category 3.

- Equipment or systems likely to fail in 1-5 years that are recommended for repair or replacement based on an estimation of life using the equipment or system's current state of wear.

Subcategory	Amount
Replace retaining wall	$28,000.00
Replace steps, sidewalk and railings	$42,000.00
Provide new railings, Repair steps	$16,000.00
Repair patio	$21,000.00
Repoint North wing brick walls	$170,000.00
Repoint South and West granite walls	$12,000.00
Clean masonry	$3,000.00
Apply breathable water repellent	$36,000.00
Replace flat roof	$60,000.00
Replace clock	$12,000.00
TOTAL	**$400,000.00**

Category 4.

- Equipment or systems likely to fail within 5-10 years that are recommended for repair or replacement based on an estimation of life using the equipment or system's current state of wear.

Subcategory	Amount
Attic Renovations	$300,000.00
HVAC	$900,000.00
Electrical	$450,000.00
Plumbing	$260,000.00
Fire Protection	$156,000.00
Renovate Kitchenette and reception desk	$30,000.00
Renovate Basement Bathrooms	$50,000.00
Renovate First Floor Bathroom	$50,000.00
Replace fire escape with enclosed stair	$60,000.00
Modify Stair #2	$20,000.00
Modify Monumental stair	$24,000.00
TOTAL	**$2,300,000.00**

B. Address Long-Standing or Urgent Needs in the Community

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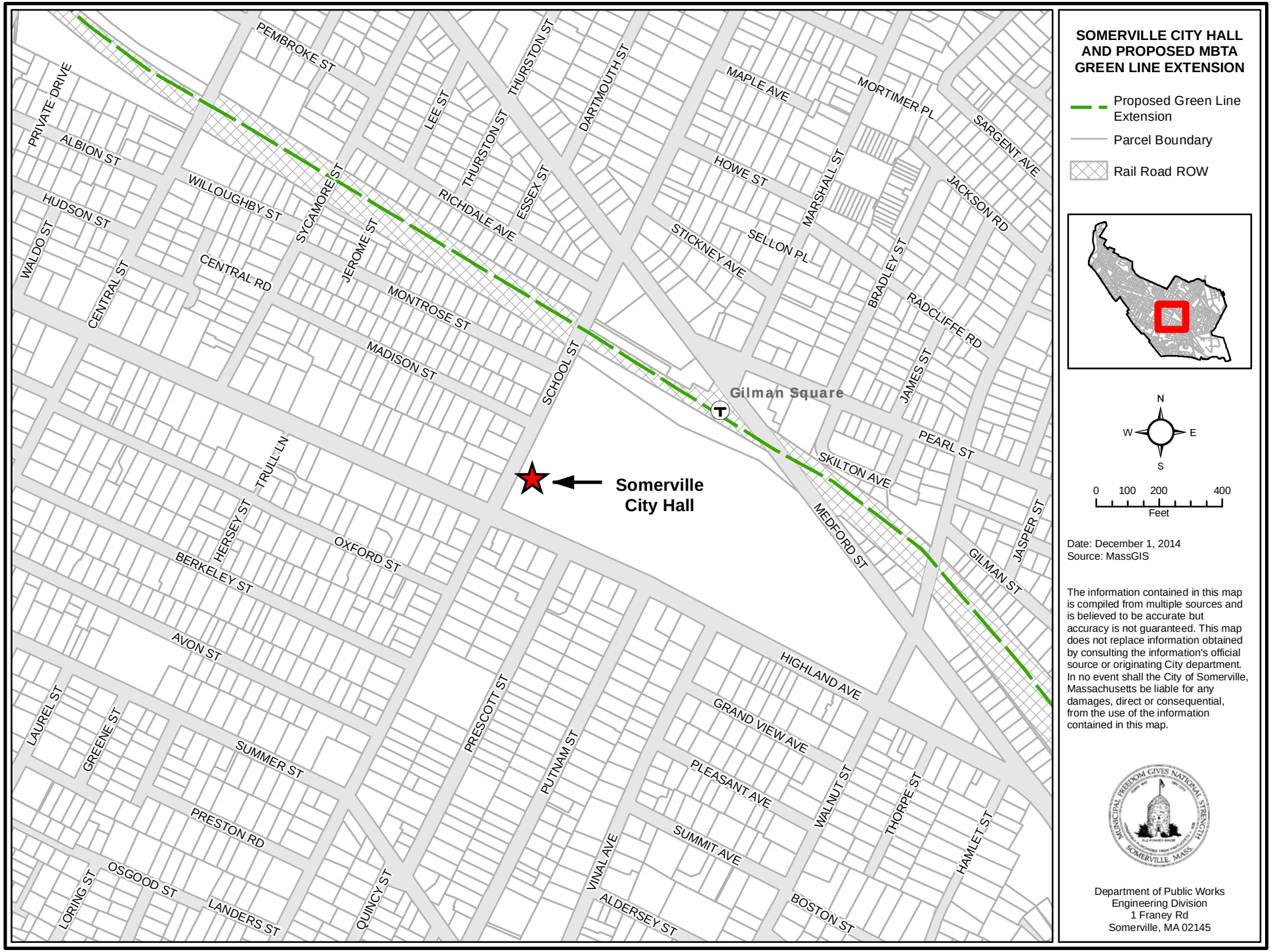
VISUAL

- **Maps**
- **Photos**



SOMERVILLE CITY HALL AND PROPOSED MBTA GREEN LINE EXTENSION

- Proposed Green Line Extension
- Parcel Boundary
- Rail Road ROW

N
W E
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0 100 200 400
Feet

Date: December 1, 2014
Source: MassGIS

Department of Public Works
Engineering Division
1 Franey Rd
Somerville, MA 02145

C:\GIS\Projects\Somerville\DPW\CityHallAndProposedGreenLine.mxd 2014-12-01 KJJ

COMMUNITY SUPPORT

- **Letters of Support**

CITY OF SOMERVILLE, MASSACHUSETTS
EXECUTIVE OFFICE ON DISABILITY & COMPLIANCE

JOSEPH A. CURTATONE
MAYOR

BETSY M. ALLEN
DIRECTOR & ADA COORDINATOR

December 1, 2014

Community Preservation Committee
93 Highland Avenue
Somerville, MA 02143

RE: Support for projects funded through the Community Preservation Act

Dear Community Preservation Committee Members:

I write to respectfully offer my unequivocal and enthusiastic support for two projects: the restoration of City Hall and the renovation of the West Branch Library that the City of Somerville has put forth to the Committee for funding consideration.

Both buildings have great historic, architectural, cultural, and civic significance to the City and its residents. Since 1872, City Hall has housed the City's main administrative offices. Today, it serves as both the seat of government and as the people's house allowing residents to do everything there, from paying their taxes to getting married. Its value to the community is unquestioned and unparalleled. The Classical Revival-style West Branch Library, a true City gem, was built mostly through a $25,000 donation by Industrialist Andrew Carnegie. The terms of Carnegie's endowment dictate that the building remains a library. Unfortunately, both buildings are in serious need of repair, including legally-mandated accessibility improvements to make them fully accessible to all. At both sites, these accessibility improvements are on hold pending funds and plans for a more all-encompassing and much needed renovation project.

It is my sincere hope that the Community Preservation Committee considers these buildings worthy of preserving and worthy of this valuable investment. Thank you for your thoughtful consideration of this matter. If I you have any questions, please don't hesitate to contact me.

Sincerely,

Betsy M. Allen

cc: George Proakis, Director of Planning, OSPCD
Steven Vitello, Project Manager, Capital Projects and Planning

167 HOLLAND STREET • SOMERVILLE, MASSACHUSETTS 02144
(617) 625-6600 EXT. 2323 • TTY: (866) 808-4851 • FAX: (617) 625-3434
EMAIL: ballen@somervillema.gov • www.somervillema.gov

CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING AND COMMUNITY DEVELOPMENT
JOSEPH A. CURTATONE
MAYOR

HISTORIC PRESERVATION COMMISSION

November 18, 2014

Community Preservation Commission
93 Highland Avenue
Somerville, MA 02143

RE: Support for projects funded through the Community Preservation Act

Dear Community Preservation Commission members,

The Somerville Historic Preservation Commission fully supports four projects the City of Somerville has proposed to the Community Preservation Commission. These projects are: 1) restoration of Prospect Hill Tower; 2) restoration of City Hall; 3) renovation of West Branch Library; and 4) National Register nomination for the American Tube Works Complex.

These buildings and complex are historically and architecturally significant to the City of Somerville. Prospect Hill Tower was constructed in the early 20th century to commemorate militia located at this site during the Revolutionary and Civil wars. City Hall was constructed in 1852 as Somerville's first high school; town offices took over the building in 1872. Andrew Carnegie donated $25,000 in 1907 to construct the West Branch Library, a high and Classical Revival style building. The American Tube Works Company is credited as being the first in America to manufacture seamless tubes; as a collection of buildings, their scale and architecture express the manufacturing purpose and magnitude of the industrial process. Prospect Hill Tower, City Hall and the West Branch Library are local historic districts; the American Tube Works was determined Significant by the HPC in September.

The Historic Preservation Commission hopes the Community Preservation Commission will recognize these to be valuable investments that will benefit the entire community. Thank you for your consideration of these projects.

Sincerely,

Dick Bauer, Chairman
Somerville Historic Preservation Commission

CC: George Proakis, Director of Planning, OSPCD
Stephen Vitello, Project Manager, Department of Public Works

HISTORIC RESOURCES

- **Historic Documentation**

CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING AND COMMUNITY DEVELOPMENT
JOSEPH A. CURTATONE
MAYOR

HISTORIC PRESERVATION COMMISSION

November 18, 2014

Community Preservation Commission
93 Highland Avenue
Somerville, MA 02143

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Sincerely,

Dick Bauer, Chairman
Somerville Historic Preservation Commission

CC: George Proakis, Director of Planning, OSPCD
Stephen Vitello, Project Manager, Department of Public Works

CITY HALL • 93 HIGHLAND AVENUE • SOMERVILLE, MASSACHUSETTS 02143
(617) 625-6600 EXT.2500• TTY: (617) 666-0001 • FAX: (617) 625-0722
EMAIL: bwilson@somervillema.gov • www.somervillema.gov

EXISTING CONDITIONS REPORT
SOMERVILLE CITY HALL

A Report to: City of Somerville
October 30, 2014

Prepared by: CDR Maguire Inc.
211 Congress Street, 11th Floor
Boston, MA 02110

Table of Contents

EXECUTIVE SUMMARY

CDR Maguire performed an existing conditions survey and analysis of the Somerville City Hall to identify the condition of the existing facility to allow for the continued operations. A team of professional architects and engineers representing each of the major building disciplines visited the site and worked in collaboration to develop and ultimately refine this report. The assessment contained herein are intended to provide the necessary background to support the recommendations presented and to provide information to the decision makers that could impact the ensuing projects.

The condition survey of the existing facility identified the immediate needs of the facility, analyzed the life expectancy of the existing building systems, identified code issues as well as threshold that trigger additional items. Most of the items identified are from deferred maintenance and from items approaching the end of their useful life.

Based on the identification of these items a construction cost of $3,302 million was calculated to address all of the issues. Including all overhead, profit and contingencies the complete project cost escalates to approximately $4.292 million. This does not include any modifications to the layout of the facility caused by programmatic changes, removal of hazardous material or design fees.

In addition to identifying the issues, a time line of scheduled repairs was provided dividing the repairs into four different categories. This revealed the following;

$ 556,000 is required for immediate repairs.
$ 46,000 is required for Life Safety improvements,
$ 400,000 is required for repairs scheduled within five years
$ 2,300,000 is required for repairs scheduled within ten years.

Based on the amount of scheduled repairs within the 5 year time frame, several code thresholds could be triggered requiring additional scope items such as full handicap access as well as the implementation of a fire suppression system. These could then intern, lead to more comprehensive interior renovations and structural upgrades

While there are several different ways to implement the repair to the Somerville City Hall, we feel that the most cost effective solution is to perform the work as one project within the 5 year time frame. Performing the work in one phase minimizes the disturbances to the buildings occupants, addresses all of the issues sooner rather than later and it reduces the facilities maintenance and operational costs. Additionally since only one contractor is involved there is no issue with project continuity and systems compatibility between separate contractors and time frames.

INTRODUCTION

The City of Somerville has commissioned CDR Maguire Inc. to perform a comprehensive building assessment of the Somerville City Hall to identify existing building deficiencies, prioritize their repairs and provide an associated construction costs to perform the identified issues.

A team of architects and engineers from CDR Maguire and RDK Engineers performed a visual assessment of the facility and identified existing building issues within the following categories that will need to be addressed within the next ten years. At this time the buildings programmatic needs were not included within the evaluation.

Civil/Site Features
Structural
Exterior Façade
Roofs
Windows
Building Interiors
Plumbing
HVAC
Electrical
Fire Protection
Accessibility
Code Compliance

The building evaluation presented in this report in this report is based on field observations, review of available construction documents, prior reports and discussions with personnel from the facility. Building codes and pertinent guidelines, presently in force locally and federally were utilized in evaluating the buildings.

This report describes the existing conditions of the facility on a per-system, per-discipline basis. Code violations, deficiencies and building issues are identified along with the probable repair costs.

FACILITY INFORMATION-GENERAL

Address	93 Highland Street	
Present Use	Business, Assembly	
Year Constructed:	1852	Central Core, Constructed as the Somerville High School
	1872	Dedicated as Somerville City Hall
	1896	Two story South Wing addition
	1924	Two story North Wing addition
	1989	Added to National Register of Historic Places
Site:	Shared with the current Somerville High School	
Number of Floors:	Basement	8,842 SF
	First Floor	8,277 SF
	Second Floor	8,277 SF
	Attic Habitable	5,559 SF
	Attic Storage	2,778 SF
Total Square Footage:		33,733 SF
Appraisal: (assumed)		$6,000,000

FINDINGS

Overall, visually, the facility appears to be well maintained and in good shape. However the in depth evaluation revealed a facility with the majority of its interior finishes, roofing, mechanical, electrical systems are approaching the end of their useful life and in need of replacement. As it typically occurs with municipal facilities, the majority of the maintenance has been reactive rather than preventative, consequently a lot of the building systems will need to be addressed and or replaced sooner than others.

The findings and recommendations are detailed in the following sections

A. SITE

Since the Somerville City Hall shares a site with the High School. We have limited our site scope to site elements that are in the immediate vicinity of the City Hall.

The sidewalks are concrete, and are generally in good condition.

The areas we observed that are in need of repair include:

1. The sealant at the Main Entry steps is missing in many places, some stone is damaged and railings need to be scraped, primed and painted. See photo 1.

   Recommendation: Replace sealant, repair steps, paint railings.
   Priority: Category 1
   Estimated Cost: $8,000.00

2. Other miscellaneous areas of deteriorated concrete walks, steps and curbs were noted. See photo 2.

   Recommendation: Remove and replace areas of damaged concrete.
   Priority: Category 1
   Estimated Cost: $7,000.00

3. The Fire Escape is rusting, and one steel post has separated from its base. See photo 2.

   Recommendation: Repair damaged metal. Strip and repaint fire escape.
   Priority: Category 2
   Estimated Cost: $22,000.00

4. The retaining wall near the Northeast corner of the building is beginning to lean. It will likely last several years before completely failing. See photo 3.

   Recommendation: At its current condition the retaining wall should be monitored to make sure that its condition does not worsen. At the same time plans should be implemented to either repair or replace the wall.
   Priority: Category 3
   Estimated Cost: $28,000.00

5. The concrete steps to School Street at the North side of the building are badly deteriorated, and the treads slope downward, creating a dangerous slip hazard in icy conditions. See photos 4-5.

Recommendation: Complete replacement of steps, sidewalls and railings. This is a safety concern and similarly to the retaining wall identified above these should be included as a priority.
Priority: Category 3
Estimated Cost: $42,000.00

6. The Basement level entrance stairs and ramp have rusted and loose railings, loose lamp posts, and cracked granite steps. See photos 6-7.

   Recommendation: Provide new railings, repair step and re-anchor lamp posts.
   Priority: Category 3
   Estimated Cost: $16,000.00

7. The Terrace on the South side of the building is leaking water and tar into the office below. Moss, plant growth and organic debris is seen on the terrace and below the pavers, and must be removed for proper function of drains. Some deterioration of the cast stone guardrail was seen. The first riser of the steps leading to the Terrace on the South side of the building is higher than the rest. See photos 8-10.

   Recommendation: Remove pavers and clean out debris. Inspect and clean drains. Remove and replace waterproofing membrane. Reinstall pavers, replacing broken ones. Insulate exposed drain pipes at Basement office to prevent condensation. At guardrail, clean all cast stone, patch all damaged cast stone with concrete repair mortar to match existing, and apply a penetrating water repellent and consolidation treatment to all surfaces. Prune trees and bushes away from terrace. Build up the grade below the steps to make bottom riser equal to the others.
   Priority: Category 3
   Estimated Cost: $21,000.00

The majority of the above identified items need to be addressed within a five year time span. Extensive exposure of moisture infiltration and continued degradation of concrete in retaining walls, sidewalks and steps will only increase the costs to perform the repairs not to mention exposing the city to possible liability issues.

B. EXTERIOR WALLS

The building structure for the facility varies with each area of the building and typically reflects the standard construction method of its era. The structural system including the foundations, walls and roof are in satisfactory condition with no visible signs of settlement or cracks.

That said, the wall construction consist of a multi wythe masonry wall. Neither the veneer nor the backup wall are reinforced or are seismically braced to the roof structure. The roof construction was designed based on the loading requirements in affect at that time.

Based the existing conditions, the facility as it currently stands, is grandfathered from requiring structural improvements. However, as renovations and improvements are performed on the facility, the International Existing Building Code (IEBC) requires code upgrades on a sliding scale. (Refer to Code Trigger Section of the report for further information)

Based on the extent of renovations, the requirements of each level needs to be evaluated and implemented. This could range from doing nothing to a comprehensive structural seismic upgrade.

Masonry:
In general, the masonry exterior components are in good condition. Approximately 2/3 of the brick was re-pointed in 1995, including the South side of the building and the two main entrances. However, at that time the entire North wing of the building and the third floor were not re-pointed, and the mortar in these areas is severely deteriorated. See photo 12. Not surprisingly, the interior finishes in these areas are also more deteriorated than on the South side; most likely attributed to the poor condition of the mortar, and more severe weather exposure. We strongly recommend re-pointing all areas of brick that were not performed in 1995.

The mortar joints in the cast stone that wraps the exterior of the basement level are generally in good condition and do not need repair, with the exception of the walls adjacent to the South terrace.

Brick walls can vary in their degree of absorptiveness, and highly absorptive bricks can suck water into the building, increasing damage to paint and plaster on the inside face of the walls, increasing interior humidity and air conditioning costs. In addition to visual inspection, the RILEM test method 11.4 was used to determine the absorptiveness of the exterior walls. In this test, a water filled tube is attached to the side of the building; if the brick or grout absorbs 1 m/l of water or more in 20 minutes or less, the brick or grout “fails” the test and is considered to be highly absorptive. Where this is the case, the wall would benefit from the application of a clear, penetrating, and breathable water repellent.

The test was performed at two locations on the building, corresponding to the different types of brick and grout that were used. At the North side of the building, the brick and mortar was found to be highly absorptive, failing in 4 and 3 minutes, respectively. At the South and Central areas of the building, the brick and mortar passed. Therefore, we recommend that a clear, breathable penetrating water repellent be applied to the North end masonry. This provides an extra measure of moisture protection, is nearly invisible and low cost.

In addition to water entering the walls due to driving rain and porous mortar, water also exits the walls in the winter, when moist indoor air escapes through the walls. This may cause efflorescence. The efflorescence seen on the Northwest corner of the building may be due to this, as well as to the composition of the brick and mortar that was used for repairs in the 1990's; see photo 11. If large amounts of moist air escape during winter months, it can also lead to spalling of the brick and mortar, but that does not appear to be the case at this time. All efflorescence and mildew should be cleaned off with a masonry cleaner approved for that purpose.

The building does not have a vapor barrier to reduce the movement of water vapor through the walls, nor is there any insulation in the exterior walls. However, installing these throughout the building would be prohibitively expensive. It would require building a stud wall or applying furring on the inside of all exterior walls, and installing a vapor barrier, insulation, gypsum board, veneer plaster and paint. It would cover over historic plaster details, and require extensive modifications to the exterior window and door trim, base and crown moldings, as well as relocating radiators, electrical outlets and any other equipment mounted to the exterior walls. It would also take away 3 to 4" from every room. Although it would increase the energy efficiency of the building, we do not recommend this work at this time.

Painted Wood:
Without exception, the exterior painted wood surfaces are badly worn and need repainting. We recommend that the City prep and repaint all wood trim with the highest quality finishes only, because inferior preparation or finishes are not cost effective in the long term. Among the best choices would be 100% acrylic coating with ceramic microspheres (Rhino Shield, Liquid Ceramic, Armorex, etc). The advantage of this type of coating is that it is offered with a 25 year warranty on materials and labor. Another excellent choice would be a Premium grade 100% acrylic latex paint (ie, top rated Sherwin Williams Duration, or equal). This product has a lifetime warranty that applies to the materials only.

Although most wood trim is in very good condition, a few limited areas show cracking, splitting, rot or missing trim. These include the bases of the wood columns, some areas of cornice at the clock tower, and some window trim. These require repair or replacement.

One unexpected finding was that wind driven rain was entering the 8 exterior louvers below the Alderman's Chamber windows, causing water leakage in the rooms below. This is most pronounced at the two louvers on the North wall, and occurs as well at the sill of the fire escape door. The louvers provide fresh air to the Chamber, and are very shallow in profile (about 1" deep) w/ aesthetically unobtrusive fine blades. They are located behind the unit ventilators on the exterior wall. Due to their shallow profile, they are not capable of keeping out wind driven rain. See photo 11.

One solution would be to remove the existing louvers and replace them with storm proof louvers. Storm proof louvers would be able to keep the rain out, but would require at least 4" of depth, and

have a more commercial look that may not be approved by the Historical Commission. An alternative would be to install a fresh air intake, and connect it to the existing mechanical ventilation system for the Chamber. To be unobtrusive, this would have to be located on the flat roof, near the clock tower. Either solution would require further study for feasibility and aesthetic impact.

The areas we observed that are in need of repair include:

1. The brick and cast stone are generally in very good condition, but the mortar at the North wing is in only fair condition. Significant moisture ingress was noted through the North wing walls. The North side and Northwest corner of the building also showed some mortar degradation and efflorescence. See photos 11-12.

   Recommendation: Re-point all North wing brick walls.
   Priority: Category 3
   Estimated Cost: $170,000.00

2. The mortar is failing on the South and West granite walls below the terrace.

   Recommendation: Re-point South and West walls below the terrace.
   Priority: Category 3
   Estimated Cost: $12,000.00

3. Efflorescence and mildew stains are seen on the Northeast and Northwest corners of the building.

   Recommendation: Clean the masonry in these areas.
   Priority: Category 3
   Estimated Cost: $3,000.00

4. Water vapor is entering the exterior walls through porous and absorbent brick.

   Recommendation: Apply clear, breathable water repellent to North end masonry.
   Priority: Category 3
   Estimated Cost: $36,000.00

5. The paint finish at wood trim is badly worn throughout building. See photos 13-14.

   Recommendation: Prep and repaint all wood trim.
   Priority: Category 1
   Estimated Cost: $325,000.00

6. A few areas of wood trim are loose, missing or appear split or rotted. These include columns, window trim and cornices. See photos 1 & 23.

   Recommendation: Repair or replace damaged wood.
   Priority: Category 1
   Estimated Cost: Included in B5

7. Sealant around window and door frames is 15 years old, and near the end of its useful life.

   Recommendation: Replace sealants.
   Priority: Category 1
   Estimated Cost: $9,000.00

8. Wind driven rain can enter the 8 exterior louvers below the Alderman's Chamber windows, causing water leakage in the rooms below. This is most pronounced at the two louvers on the North wall. See photo 11.

   Recommendation: Replace all 8 louvers with storm-proof louvers, or at a minimum replace the two louvers on the North wall. Investigate feasibility of fresh air intake at roof.
   Priority: Category 1
   Estimated Cost: $8,000.00

9. Damaged paint and plaster exists in localized areas on interior face of exterior walls.

   Recommendation: Repair all damaged paint and plaster on exterior walls of building.
   Priority: Category 1
   Estimated Cost: Included in B6

C. EXTERIOR WINDOWS AND DOORS

Windows:

There are approx. 170 windows throughout the building, most being single hung. Sizes vary, but average approx. 8' high x 32" wide. Windows have wood sashes and frames, 6/6 lites with wood muntins, and appear to be of good quality. Most sashes have been retrofitted with insulated glazing and weather stripping. The condition of the window sashes and frames are good, with little sign of wood rot seen. However, the sashes have excessive play, some weather stripping is missing, some glazing compound is cracking, and exterior painting is needed. Interior wood is unfinished. See photo 14.

Window Performance:
The effectiveness of a window in preventing the loss of heat is measured in "R-value"; the higher the R-value, the better the window is a keeping the cold winter air and hot summer air out. It is difficult to accurately determine the energy efficiency of the existing windows without costly laboratory testing, because they appear to be custom. For comparison, the R-value of a comparable Marvin "Wood Ultimate Double Hung Magnum" window w/ insulated glass (1/8" glass + 1/2" spacer + 1/8" glass=3/4" overall) and simulated divided lites is 2.17; with Low-E glass it is 2.94, and with Argon it is 3.23. The windows at the City Hall have thinner insulated glass (1/16" glass + 1/4" spacer + 1/16" glass=3/8" overall), which reduces their performance relative to the Marvin. The leakage due to the excessive play of the sashes also reduces their performance relative to the Marvin. We would expect the R-value to be at least 50% lower than the Marvin, in the range of R 1.1 – 1.6.

Window replacement could effectively double the R-value. However, given the quality and historic value of the windows, the most cost effective solution would be to repair the windows and replace the weather stripping.

The areas we observed that are in need of repair include:

1. Window sashes have excessive play when being raised or lowered, but do not move once sash locks are closed. Vinyl weather stripping is falling off the sashes and frames in various locations. Glazing compound is cracking at most windows. The paint at all windows and doors is very worn. See photo 14.

   Recommendation: Remove sashes; shim out sides to proper clearances; replace glazing compound; paint sashes; apply new silicone bulb weather stripping at meeting rail and bottom; replace weather stripping; reinstall sashes.
   Priority: Category 1
   Estimated Cost: $150,000.00

2. All 4 windows and storm windows at the clock tower are badly deteriorated and clearly letting in water. See photos 23 & 25.

   Recommendation: Remove 4 storm windows and replace 4 double hung windows, to match the rest of the building.
   Priority: Category 1
   Estimated Cost: $6,000.00

3. Existing exterior entry doors, fire escape doors, and roof door have peeling finishes, dings, worn weather stripping and hardware. See photos 1, 2, 7 & 22.

Recommendation: Prep and paint doors, inspect, replace weather stripping, lubricate and adjust hardware.
Priority: Category 1
Estimated Cost: $11,000.00

D. ROOF

The last major re-roofing appears to have taken place in 1991, approximately 23 years ago.

The areas we observed that are in need of repair include:

1. The slate roof is in good condition, with only a few missing or cracked slates. See photo 18. There were three roof leaks observed above the South attic, and with further investigation, more may become apparent.

   Recommendation: Replace any missing or cracked tiles (approx. 20). Repair roof leaks.
   Priority: Category 1
   Estimated Cost: $8,000.00

2. The existing Carlisle .060" EPDM roof was installed in 1991 and is approximately 23 years old. Carlisle offers a 20 year warranty on this product. The membrane appeared to be in very good condition, well adhered and with no visible tears. No leakage was reported. Some sealant joints appear to be cracking. See photo 17.

   Recommendation: Maintain the roof in use until it fails. Budget roof replacement cost including insulation and vapor barrier to be replaced within 5 years.
   Priority: Category 3
   Estimated Cost: $60,000.00

3. Copper copings are in good condition, with a few notable exceptions. See photos 15 & 16.

   Recommendation: Repair damaged copings.
   Priority: Category 1
   Estimated Cost: $14,000.00

4. The strainers are broken at several roof drains.

   Recommendation: Replace broken strainers.
   Priority: Category 3
   Estimated Cost: Included in D2

5. The crossover stairs to the West Roof are dilapidated, missing pieces, and not OSHA compliant. See photo 22.

   Recommendation: Replace crossover stair.
   Priority: Category 2
   Estimated Cost: $5,000.00

6. The elbows and collector heads at several copper downspouts have split open, allowing water to cascade down the face of the building. See photo 13.

   Recommendation: Replace broken downspouts and collector heads.
   Priority: Category 1
   Estimated Cost: Included in D3

E. CLOCK TOWER

The clock tower is subject to extreme weather conditions, including intense sun, driving rain and ice. As a result, there is a serious problem with water infiltration, and the previous paint job exhibited extreme deterioration in relatively short time. See photos 12 & 13.

We observed the clock tower on a day with moderate to heavy rain and winds. Based on observations of the location of water and damage, it is our conclusion that most water is coming in through the windows, while a much lesser amount is coming in through the walls. All 4 wood windows in the clock tower are extremely deteriorated, and 3 of the 4 storm windows were shattered due to high winds. See photos 13 & 25. No water was seen entering from the copper roof areas.

Some dampness and staining was seen on the exterior wood walls. See photo 25. From our observations, there does not appear to be an air barrier (building paper) present behind the clapboards, except at a few locations where repair had taken place. Although installing an air barrier would be the best way to ensure water-tight walls, it would require removal of all clapboards and trim, down to the bare sheathing. In lieu of this extensive approach, an effective weather barrier, such as a very high build acrylic or ceramic paint, can be applied to the surface of the clapboards and trim.

Due to some missing weather stripping, some wind driven rain may enter the clock tower via the door at the flat roof.

The clock tower floor structure consists of 2x8 wood joists spaced at approximately 17”o.c. There are three different levels to the clock tower, varying in plan dimensions. The floor joists, beams and columns appear in good condition. Due to moisture infiltration the tongue and groove wood

flooring and subfloor in some locations have rotted and warped. It is recommended that these areas be replaced.

The areas we observed that are in need of repair include:

1. All 4 windows and storm windows are badly deteriorated and clearly letting in water.

   Recommendation: See C2 above.

2. The exterior walls are letting in water, as evidenced by the stained wood paneling inside the clock tower.

   Recommendation: Strip and repaint entire clock tower with advanced, long-wearing, wind-proof, breathable finish. See B5 above.

3. The exterior paint finish is badly deteriorated.

   Recommendation: See B3 above.

4. Some areas of exterior wood trim are coming loose.

   Recommendation: See B4 above

5. Stairs have damaged treads and floors are rotted. See photo 24.

   Recommendation: Replace all stair treads and rotted flooring
   Priority: Category 2
   Estimated Cost: $6,000.00

6. Stair railings are wobbly or non-existent. See photos 24 & 25.

   Recommendation: Install steel railings at all stairs and provide steel ladder to clock room.
   Priority: Category 2
   Estimated Cost: $5,000.00

7. Clock mechanism is not working.

   Recommendation: Repair and or replace the clock mechanism to working condition.
   Priority: Category 3
   Estimated Cost: $3,000.00 for Repairs
   $12,000.00 for Replacement

8. Holes have been made in the exterior wall for pipes and wires, but have not been sealed.

   Recommendation: Seal all through wall penetrations.
   Priority: Category 1
   Estimated Cost: See B5 above.

F. ATTIC

The City has identified the possibility of wanting to convert the existing attic space on the third floor, an area of approximately 850 s.f., to office use. It is a raw space with exposed wood framing, brick walls, piping, no heat or ventilation, no insulation and minimal lighting. Several small leaks were noted in the roof above. See photos 20 & 21.

Presently the attic space is utilized for storing City records, so conversion of this space to offices is a change of use. The volume of the records stored in the attic space is quite large and one would think that converting this space into offices will reduce the overall floor loading that presently exists on the attic floor. However, the Building Code requires that the strength of the attic floor be adequate to support office gravity loads, as defined by the Code. The floor structure was found to be deficient for this loading.

The trusses in the attic support both the third floor and the roof. The third floor is supported on the bottom chord of the trusses and the roof is supported on the top chord of the trusses. The bottom chords of these trusses are supported at the exterior walls and at the center corridor walls. Based on a structural analysis of these wood trusses, we have concluded that they are not adequate to support the current Building Code's office live load of 50 pounds per square foot (PSF) plus 20 PSF dead load required for the partition loading.

Additional truss analyses indicated that these trusses are adequate to support 25 PSF snow load, in addition to 20 PSF live load in the attic area. It may be noted that the roof snow loads are higher in the latest Massachusetts State Building Code. Unless major structural renovations are performed in the building, the truss capacity need not be upgraded.

We have looked into increasing the load capacity of the existing trusses. Both the top and bottom chord of the trusses will need steel reinforcement. The lower (second) floor level will be disrupted to install steel reinforcing members, attached to the bottom chord of the truss. The existing floor joists also have limited shear capacity and will need to be strengthened with fiber-reinforced polymer at the joist ends.

The structural renovations to the floor joists and trusses will be quite expensive. They must be performed if the attic space is to be converted into offices.

It is strongly recommended that the present attic floor storage be re-evaluated and limited to maximum 20 PSF loading.

Recommendation: In order to be used for offices, the space would require new walls, doors, ceilings, floor finishes, electrical, lighting and HVAC. Insulation will be needed on the brick wall and between the rafters.
Priority: Category 4
Estimated Cost: $300,000.00

G. BUILDING INTERIOR

The finishes within the existing facility are in good conditions and properly maintained, albeit some of the colors, patterns and finishes are dated.

Flooring:
The majority of the existing flooring is terrazzo, VCT, carpeting or ceramic tile. For the most part the flooring is in good to fair condition with the flooring in some areas worn, although not bad since some of the flooring is original from the 1850's some areas .

Walls:
The walls consist of either painted CMU or gypsum wall board, with some acoustical wall tiles in dedicated areas. The walls surfaces are in good condition requiring only cyclic washing and painting.

Ceilings:
The ceiling construction varies from gypsum board to acoustical ceilings.

Recommendation: The entire wall surfaces, as part of cyclic maintenance program, need to be painted.

The carpet flooring is worn and in the near future will be in need of replacement. Flooring with a hard surface (terrazzo/stone) is in good condition, however it can be ground down to bring back some of the original coloring.

The ceilings are in good shape and can remain as is. That said, if and when the facility undergoes the installation of a fire suppression system, it will require that all ceilings be either replaced or cut and patched to install the fire suppression systems. Hard plaster ceilings should be included with the cyclic wall painting schedule.
Priority: Category 1
Estimated Cost: Budget $5,000.00 for cyclic yearly painting and finish upgrades

H. HVAC

1. Heating System:

The building is a low pressure steam system supplied steam from the High School. A 4-inch steam main serves City Hall through an underground pipe from the north end of the High School to the basement of City Hall. The steam main in City Hall rises up to the top floor where it feeds down through the building to radiation. Control of the heating system consists of a main steam control valve at the top floor and local self-contained thermostatic valves at the local radiation. The system is in fair condition but has exceeded its life expectancy.

Recommendation: A new dedicated boiler room is recommended to separate City Hall from connection to the High School heating plant. It is assumed that a 12 'x 12' area can be area can be utilized from the basement to house the boiler room. If this is not the case than a boiler room addition will be required to house the mechanical equipment.

The new boiler plant for City Hall shall be a hot water gas fired boiler plant with two high efficiency boilers sized at 2/3 capacity each. The heating plant shall include base mounted hot water pumps to supply heating hot water to City Hall. The new hot water system would replace the steam heating system.

Priority: Category 4

Estimated Cost: $900,000.00

2. Air Conditioning:

In general, City Hall is not air conditioned except at the Alderman's chamber, Mayor's office, computer room and a few other locations via small split systems. The Alderman's chamber is served by two (2) relatively new split system heat pumps located in the attic. The Mayor's office air conditioning unit is a split air conditioning unit and is located in the attic. The computer room air conditioning consists of two (2) 5-ton capacity Liebert air cooled units.

Recommendation: The existing air conditioning system provides cooling to select areas of City Hall. A new air conditioning system is recommended for the entire building and would include an air cooled chiller at grade and include chilled water pumps to supply cooling to City Hall. The air conditioning system for City Hall is recommended to be fan coil units in each space to provide heating and cooling. The existing air conditioning units which are split AC units servicing Alderman's Chamber, Mayor's Office and Computer Room shall remain and be reused. The use of the individual existing AC units will allow these spaces to be utilized while the remainder of City Hall is not being cooled.

A dedicated outdoor ventilation system is recommended to provide conditioned ventilation air to the building. The unit shall include an energy recovery heat exchanger wheel to recover energy from the exhaust air to condition incoming ventilation air.

Priority: Category 4
Estimated Cost: Included in H1

I. ELECTRICAL

The main electric service is 1200 amp, 208/120 volt, 3-phase service fed from a pad mounted utility transformer on the north side of the building. There is a main distribution panel in the basement which feeds out to electrical panels throughout City Hall. The main electric service was installed in 1980 and is in fair condition but it appears that the service is utilized to its maximum capacity and would have to be replaced with a renovation/upgrade to City Hall.

Lighting is primarily fluorescent lighting.

Fire alarm is a Simplex fire alarm system and there is a smoke detection system throughout City Hall as the building does not have a sprinkler system. Any renovations would require the fire alarm system to be upgraded.

Recommendation:

Electrical Service: The building shall be serviced via a new pad-mounted transformer adjacent to the building. High voltage service to the transformer shall be provided by from the electric utility. The main electric room shall contain a new recommended 600-ampere 480Y/277-volt main switchboard (MDP). Main breaker shall be 100% rated insulated case with an adjustable electronic trip unit and customer metering. Distribution over-current protective devices shall be bolt-on thermal magnetic circuit breakers. All bus shall be copper. Major loads shall be serviced from the MDP including the elevator, and other loads in excess of 200A.

Distribution: All panelboards shall be provided with copper bus, bolt on circuit breakers and have door-in-door construction. Panelboards shall have 20% spare circuit breaker capacity.

Wiring methods for all feeders shall be EMT for interior. All feeder conductors shall be copper.

Emergency Power: A new 125KW, 480Y/277V, 3 phase, diesel-fired generator shall be provided to service designated emergency and standby loads in the City Hall. The generator shall be located exterior at grade.

General Power: New general power distribution throughout

Interior Lighting: High efficiency lighting shall be provided in all interior spaces as well as on the exterior of the building. The light power density in the interior of the building shall not exceed 1.1 W/sq. ft. Fixtures with T5 or super T8 lamps (T5 preferred) shall be provided; LED lamps shall be considered. Interior lighting system shall be designed to comply with the requirements of Massachusetts Energy Code (IECC 2012).

Exterior Lighting: Pedestrian walkways shall be designed for an average maintained illuminance value of 0.6 footcandle horizontal, and 1.1 footcandle vertical, as measured 6'- 0" above ground, and shall maintain an avg/min illuminance uniformity ratio not to exceed 4:1. Exterior building lighting shall be provided at all entrances.

Fire Alarm System: A new addressable fire alarm system shall be provided for initiation device monitoring and evacuation signal initiation. The system shall be based on engineering criteria as defined by NFPA 72-2010, the Massachusetts State Building Code 780 CMR, the City of Somerville Fire Department. The fire alarm control panel shall be fed from the generator emergency life-safety branch.

Priority: Category 3
Estimated Cost: $450,000.00

J. FIRE PROTECTION

During the visit, RDK was not able to gain access to the sprinkler service room. There is a stand pipe in the main stair with hose valve connections. There is sprinkler coverage only in the attic space.

Recommendation: A major renovation to Somerville City Hall will require, a complete sprinkler system installation per the Massachusetts State Building Code, Chapter 34. The Fire Protection system would be designed to meet the requirements of NFPA 13 – Installation of Sprinkler Systems.

A dedicated 8” sprinkler service will need to be extended from the street water mains outside the building. The exact entrance location will need to be coordinated. As the sprinkler service enters the building a Massachusetts approved double check valve assembly complete with O.S.&Y. valves on the inlet and outlet will be required.

The alarm check valve for the sprinkler system will be installed on the riser after the double check valve assembly in the water service entrance room. The alarm check valve will be complete with a standard trim package including pressure gauges, retard chamber, 2" main drain, water flow indicator and supervisory switches.

The main feeds out to the system from the alarm check valve will extend out to the building through the basement ceiling space to a combination standpipe and sprinkler system riser. The piping will then extend to all areas of the building so that each section of the building and each floor can be divided into separate zones.

The sprinkler system risers will feed the sprinkler system at each floor level. Each floor will be a separate zone. The floor control assembly off of the standpipe which feeds each floor will contain a flow switch and tamper switch. An inspector's test connection will be installed on the most remote location of the system.

Sprinkler heads throughout the building where gypsum or suspended ceiling are installed will be glass bulb, quick response, chrome plated semi-recessed type. In areas where no ceilings are installed brass upright sprinklers will be installed. Where upright sprinklers are subject to potential damage, such as in storage rooms, protective cages will be installed. In areas where it is not possible to run piping above the ceiling the use of sidewall sprinkler heads would be recommended.

The following initiating devices shall be provided:

Manual pull stations at each egress and stairwell entries.

Sprinkler flow and tamper switches

Priority: Category 4
Estimated Cost: $156,000.00

K. PLUMBING

Plumbing Fixtures:
Toilet rooms are located on basement, Level 1 and Level 2 of the building. Although some ADA water closets have been installed in the larger toilet rooms the other fixtures that exist in the toilet rooms are not meeting ADA requirements.

Sanitary and Vent System:

It appears the sanitary system is a gravity system. The sanitary piping is cast iron. The existing piping appears to be in fair condition.

Recommendation:

Cold Water Distribution: A new 6" water service to the building is recommended. The installation of a water meter on the new service will be required.

Plumbing Fixtures: The majority of water closets, urinals and lavatories in the building are old and not current water conserving type. Removal of all fixtures is recommended as the major renovation proceeds. The water closets should be replaced with new 1.6 GPF flush valve units. The urinals should be replaced with 1 GPF units. The lavatories should be replaced and new metering type faucets with temperature limit stops which will deliver 0.5 GPM water with maximum temperature of 110 degrees, should be installed. ADA requirements will also need to be met during a renovation to the toilet rooms.

Hot Water Distribution: Local electric domestic water heaters serving the toilets shall be provided.

The hot water for the new water heaters would be stored at 120 degrees F. Metering faucets will be provided on the lavatories.

Sanitary and Vent System: A new sanitary system in the existing building is recommended due to age of the piping system.

Priority: Category 4
Estimated Cost: $260,000

L. ACCESSIBILITY

The areas of the facility constructed prior to the issuance of the Massachusetts Architectural Access Board (MAAB) and the Americans with Disability Act (ADA) fail in providing handicap access to and within the facility.

Most of the issues identified are toilet room accessibility and modifications need to be performed at numerous door approaches, door hardware replacement as well as upgrades to non–accessible exterior doors.

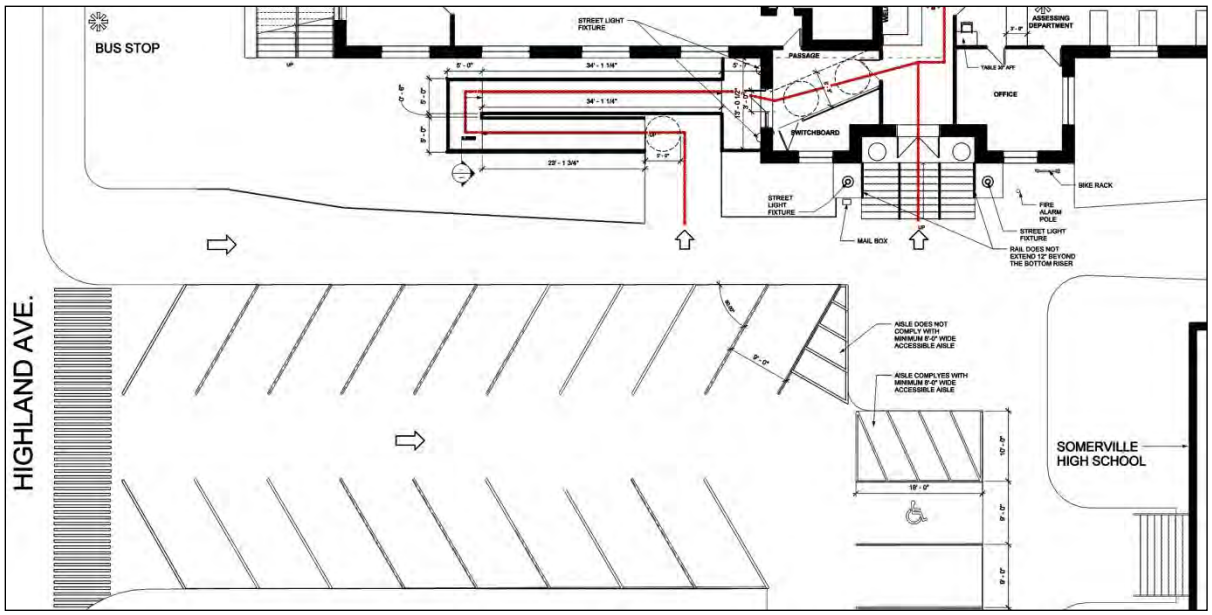
Recommendation: The implementation of full handicap accessibility is required once the project costs reach the 30% threshold of value of the building. Since the building is assessed at 6.0 million dollars, full compliance is required when the project cost exceeds 1.8 million dollars. Multi-

phased construction projects are calculated over a three year time period.

That said all of the items identified below can be either addressed as a comprehensive interior renovations incorporating programmatic space modifications or as standalone projects.

Priority: Category 4
Estimated Cost: See individual line items below

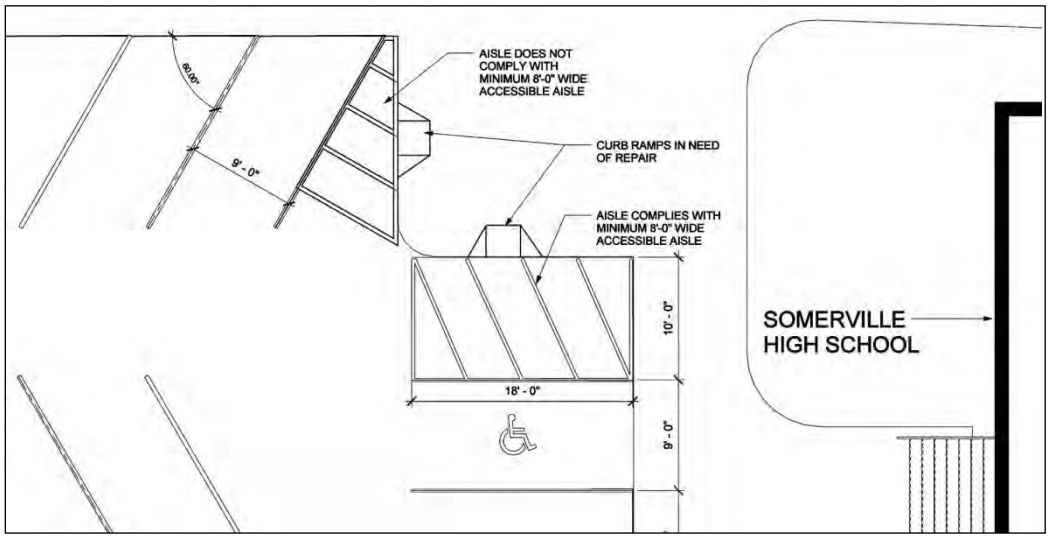
Car Accessible Parking Space & Van Accessible Parking Space



Main entrance Parking

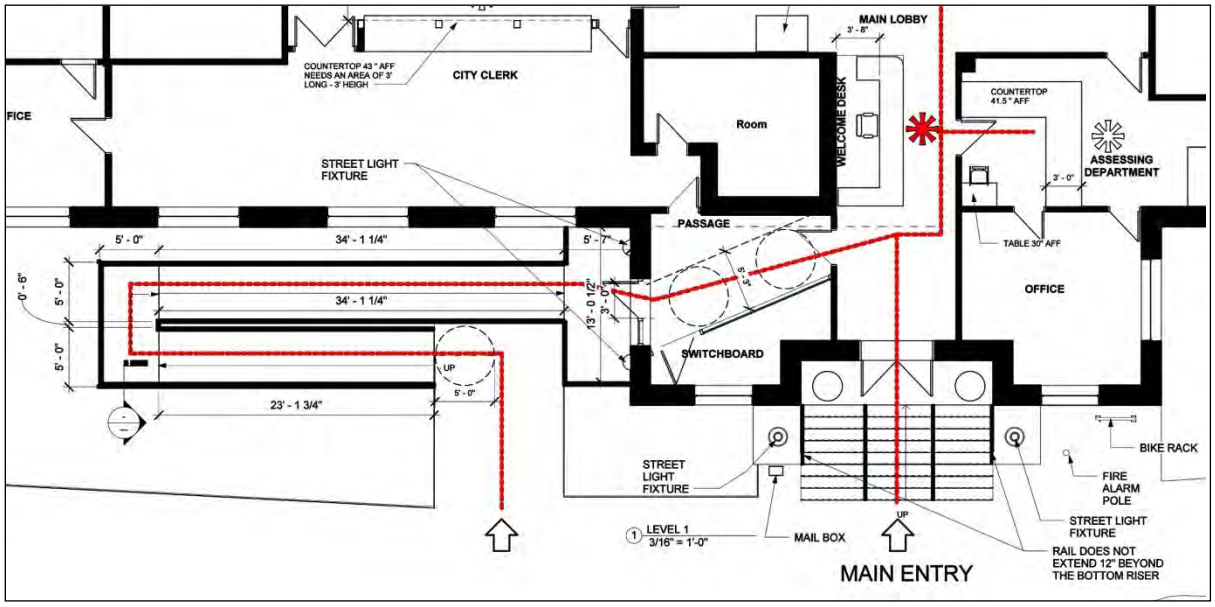
The general public can reach city hall by driving or using public transportation. The sidewalk provides access from the bus stop located at Highland Ave. to the ramp adjacent to the main door to level 1 lobby, or to the accessible ramp located at School Street at the basement level entrance. When driving, people park in the parking lot in front of the building. The City Hall parking is shared with Somerville High School. It has one accessible parking space that complies. The access aisle provides more than the 8'-0" wide requirement for a van parking.

Recommendation: The concrete curb ramp from the dedicated spaces is cracked and in need of repairs. Additionally the asphalt area adjacent to the curb is also damaged and in need of patching.
Priority: Category 1
Estimated Cost: $5,000.00



Enlarged area of accessible parking

Main Entrance Accessible Ramp:



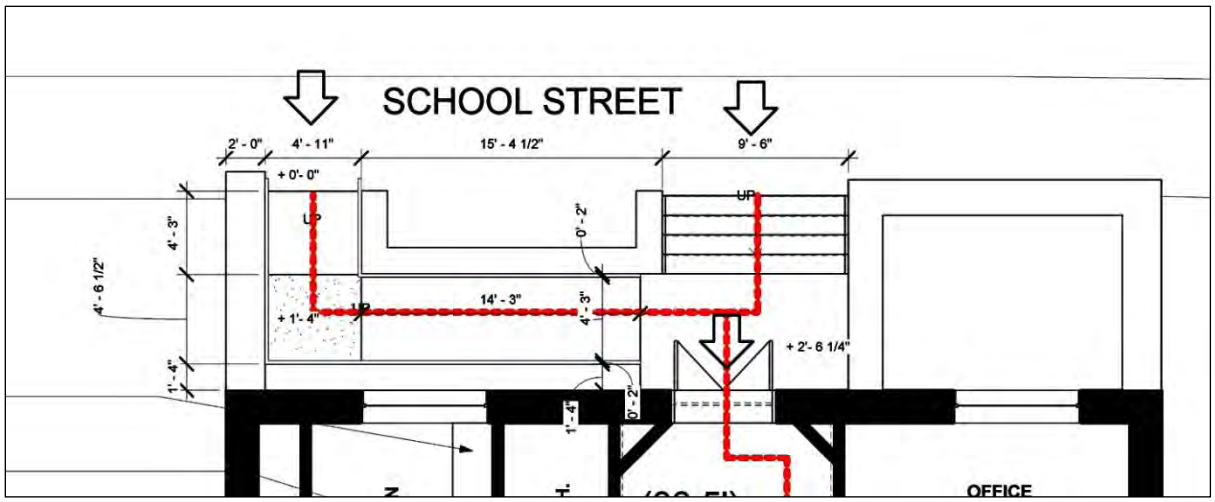
Enlarged plan view of accessible ramp

The accessible ramp adjacent to the main door was recently renovated. Site observation confirms that the ramp was built with a maximum slope of 1/12 or 8%. The longest section of the ramp is 34'-1 and it rises 36" in height 22" from the nearest landing an 8% incline. The short section of the ramp is 23'-1" and rises in height from landing 22", or 8% rise. Once at the top of the ramp the entry point complies with the standards, the door opening is 36" wide and there is an automatic

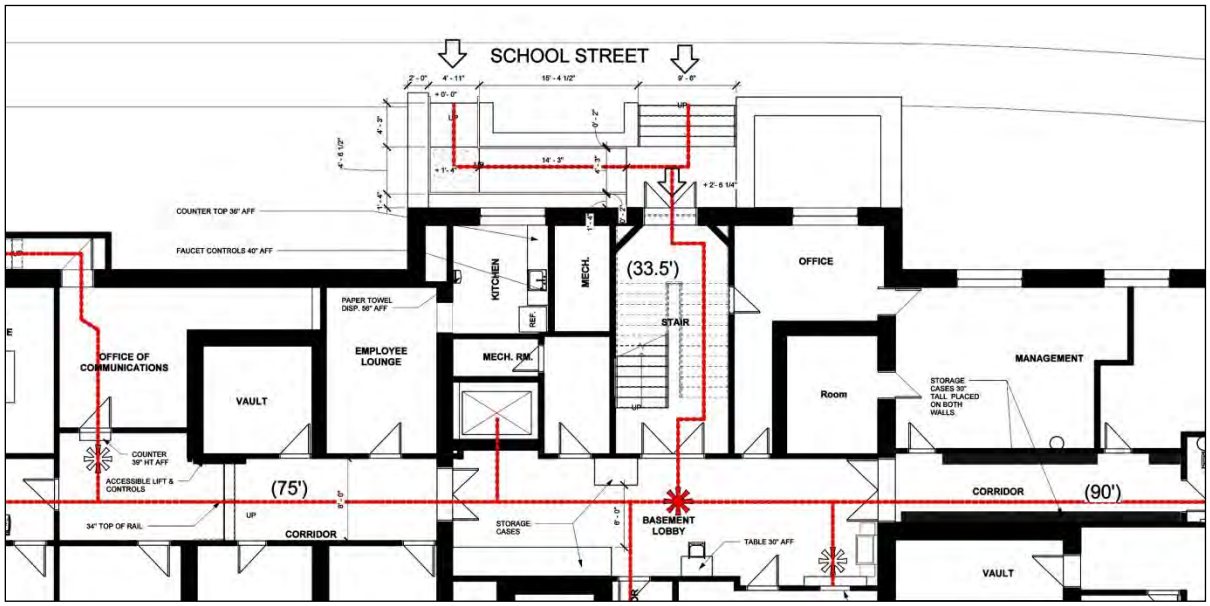
door opening device provided. The passage from the entry point passes in front of the switchboard and measures 5’-0” wide.

The one issue with the ramp is the length of the first run. According to the accessibility the maximum length of a ramp run between landings shall not exceed 30’ (521 CMR – 24.4)

Basement Accessible Ramp:



Enlarged area of School Street accessible ramp



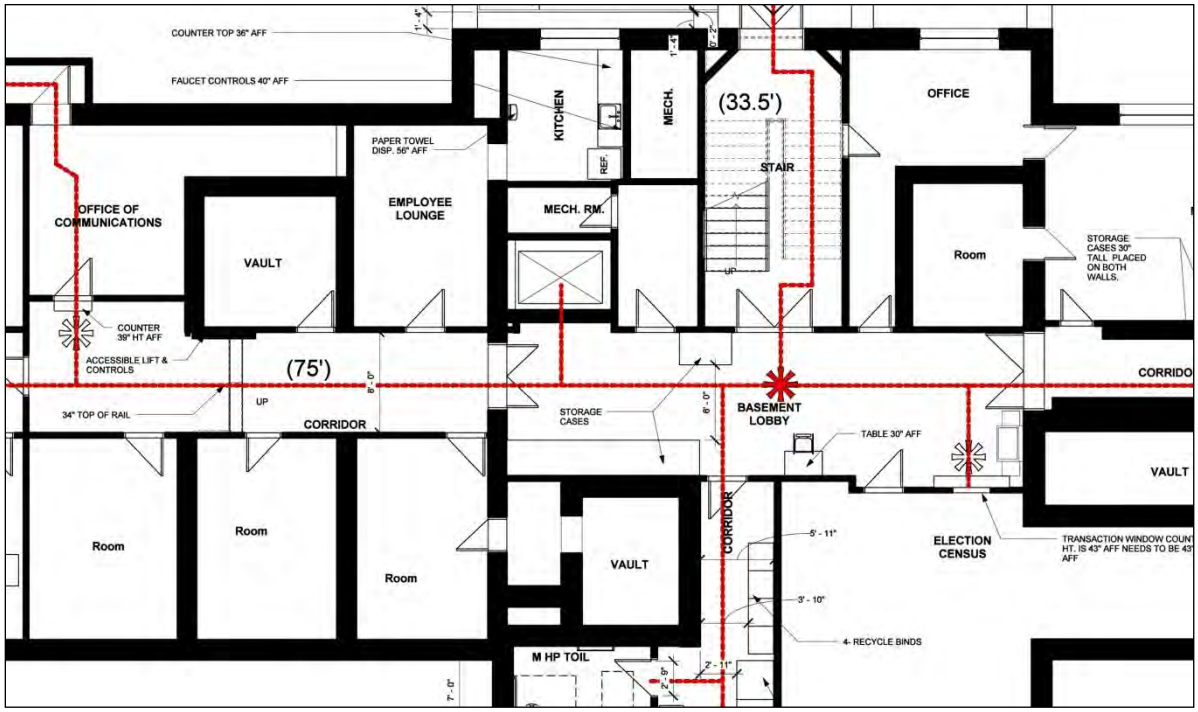
Expanded view of the basement access sequence

Recommendation: The Accessible ramp to the basement lobby currently meets ADA requirements .The ramp to the first floor exceed the run length. At the time the facility is in full compliance with ADA and MAAB, however if additional repairs and improvements are performed these will trigger the requirement for all building elements to be in compliance with the accessibility requirements. If this is implemented we would recommend that the City petition the MAAB for a variance on the maximum ramp length.

Priority: None

Estimated Cost: None

Access to Services- Basement Level Lobby



Enlarged view of the basement lobby

Wherever there is interaction between city personnel and general public, it is mandatory to provide a portion of the public access counter or an auxiliary counter that is a minimum of 36” long and is no higher than 36” above the floor There needs to be an area that is minimum 30” x 48” for a single stationary wheelchair and occupant to allow a forward approach.

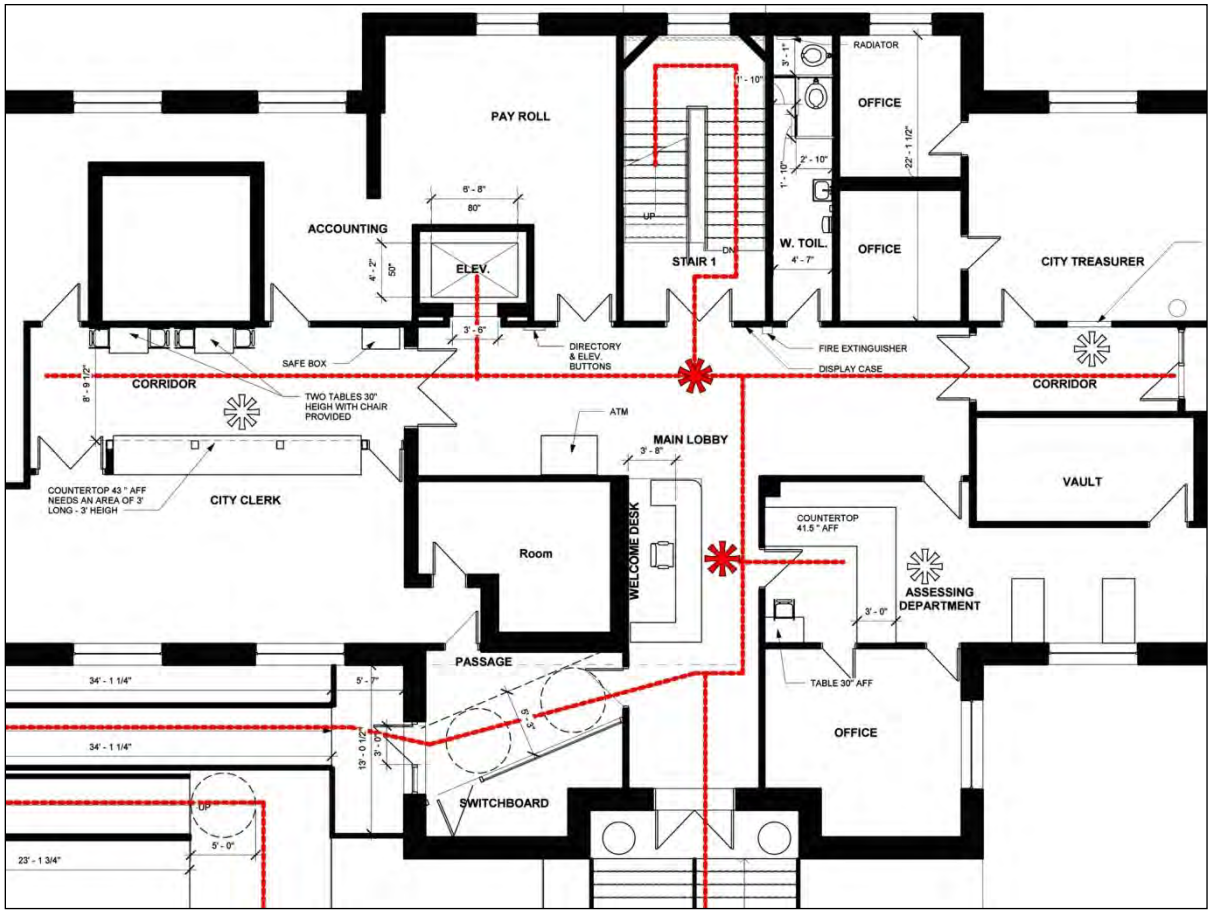
The Election Census desk and the Human Resources desk are 43” high but there is a 30” high table nearby provided for accessibility requirements. The Office of Communication desk is 39” high and does not provides a 36” auxiliary counter.

The areas we observed that are in need of repair include:

Recommendation: Storage boxes should be removed from the corridors.
Priority: Category 1
Estimated Cost: $0.00

Level 1 Lobby

The Reception/Welcome desk is 44” high and The City treasurer counter height is 43”, both do not provide a 36” high auxiliary table because of lack of space. Assessing Department Desk is 42” high and provides a small table 30” counter height. The City Clerk Counter height is 43” there are two small 30” counter height tables provided in the opposite side of the corridor.

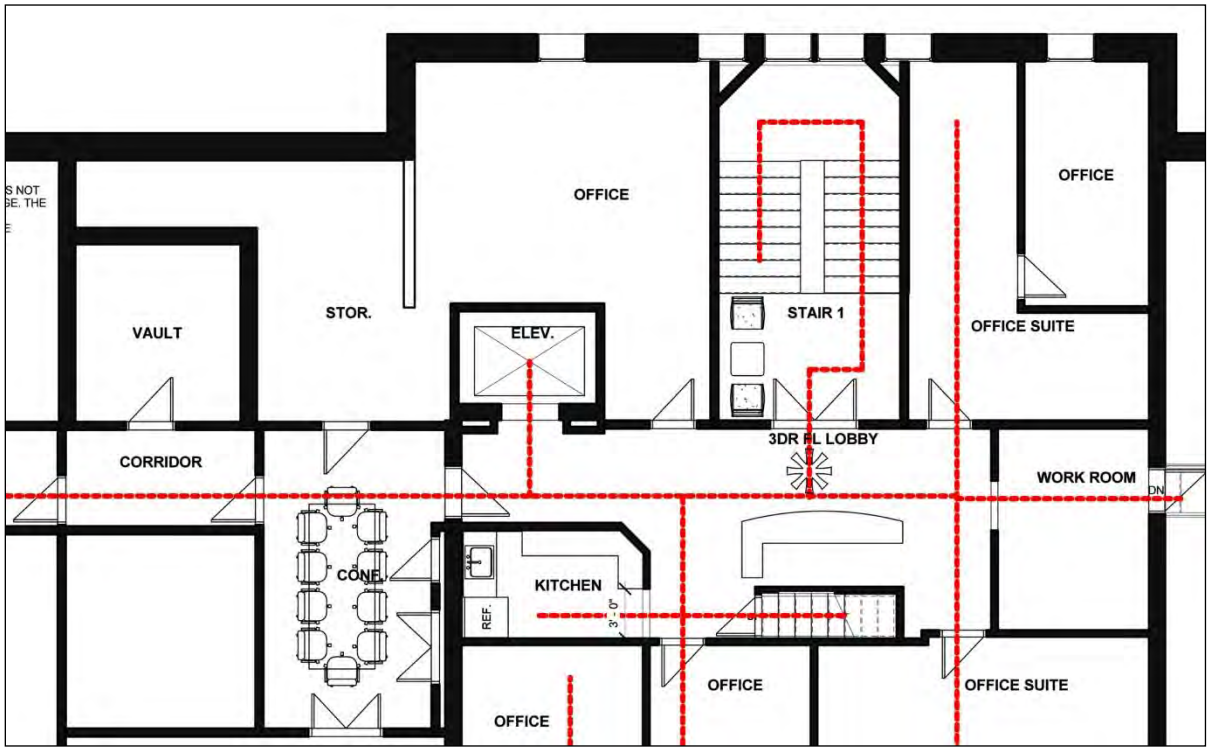


Enlarged view of the level 1 lobby

Level 3 Lobby

There is no portion of the counter of the third floor reception desk that is 36” above the floor and 36” long. The waiting area located at Stair 1 landing does not provide a space for a wheel chair.

Kitchenette is not accessible, and numerous doors do not have the proper clearances on the pull and push side of the door.



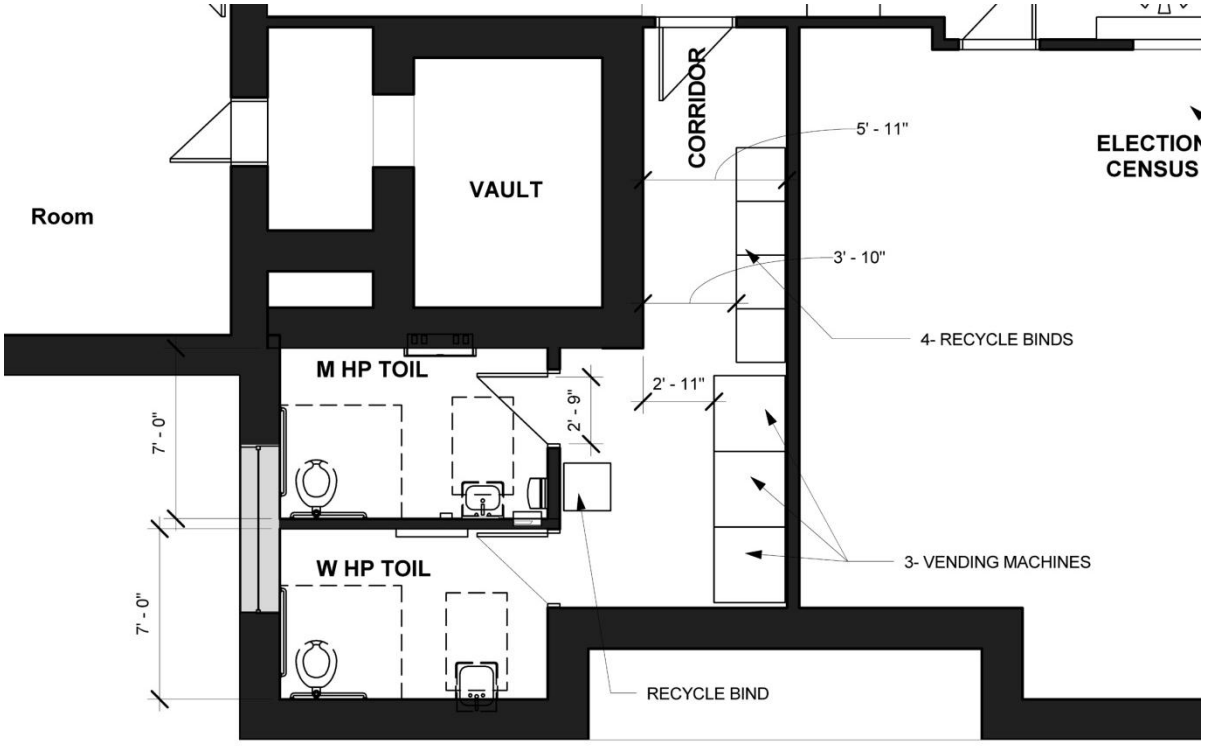
Enlarged view of the level 3 lobby

Recommendation:	Renovate kitchenette and reception desk to be accessible. Utilize power assist door operators to comply with the required door push/pull dimensions
Priority:	Category 4
Estimated Cost:	$30,000.00

Toilets

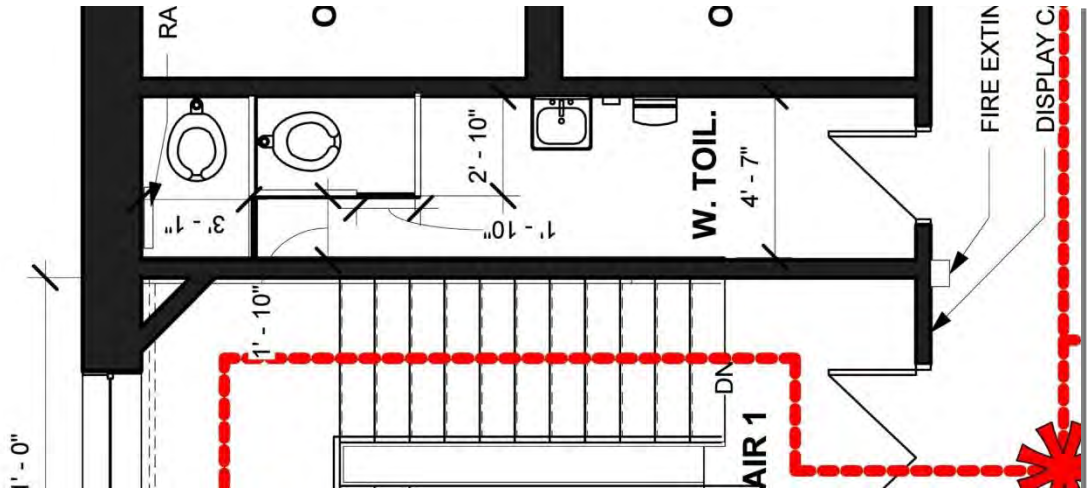
The Basement and Second Floor bathrooms appear to have been renovated last approximately 20 years ago. Floors are terrazzo, walls have a 6' high ceramic tile wainscot with plaster above, and ceilings are plaster. All appear to be in good condition, except for some staining and patching of the basement floors. Lighting is adequate, with wall mounted fluorescent fixtures. Mechanical ventilation appears to be absent at the basement bathrooms, but air quality was satisfactory, likely due to the leaky windows. Fixtures and accessories are in good working order, but in some cases mismatched in appearance.

Basement Toilets

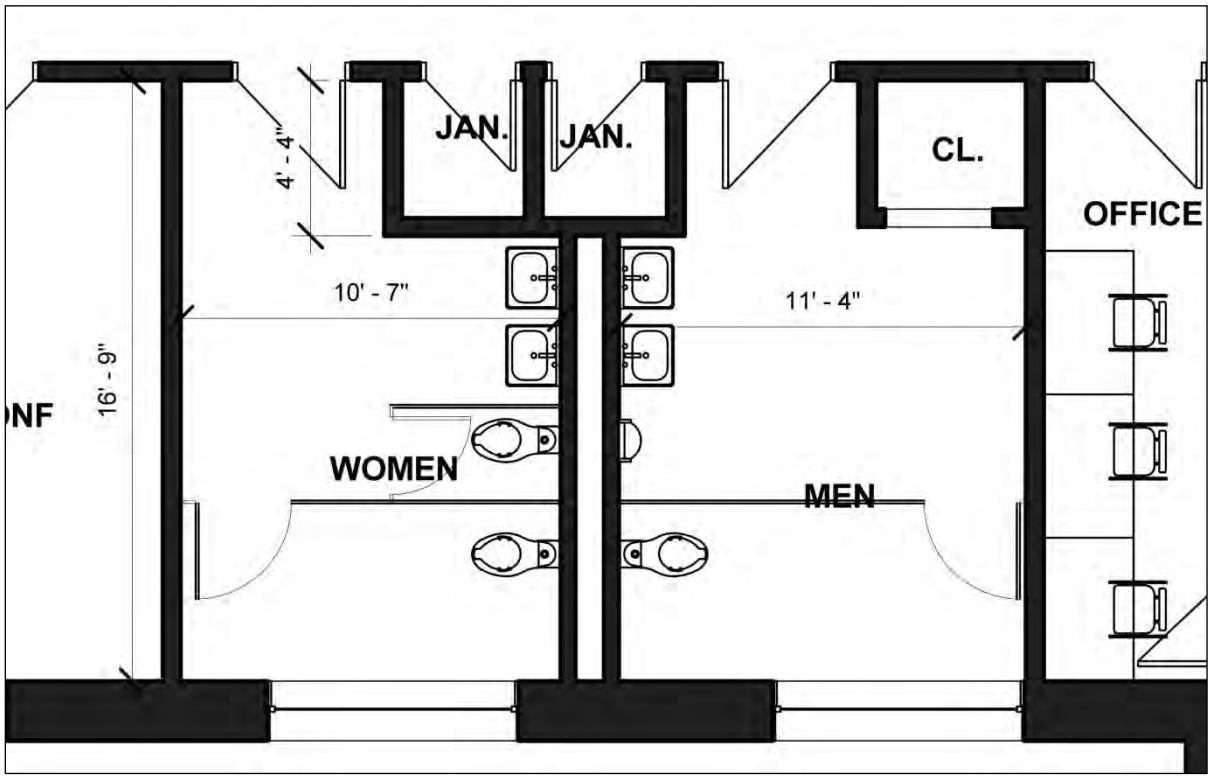


Enlarged view of the basement toilets

1st Floor Toilet



First Floor Toilet Plan



Second Floor Toilet Elevation

1. Basement Bathrooms: Pipes and radiators are badly rusted and unsightly. See photo 18. Mechanical ventilation, a Code requirement, is absent. Slide bolt locks at bathroom doors interfere with power door operators and are not handicap compliant. Inadequate stalls cause inconvenience.

   Recommendation: Complete Renovation
   Priority: Category 3
   Estimated Cost: $50,000.00

2. There is only one toilet room on the first floor. It is a multi stall female toilet room which is not handicap accessible.

   Recommendation: First Floor toilet must be changed to accommodate a 60" turning radius. A minimum and temporary fix would be to add a sign outside the door directing people to the accessible toilets located on other floors.
   Priority: Category 1
   Estimated Cost: None – For signage
   $50,000.00 for renovation

3. Second Floor Bathrooms: Inadequate stalls cause inconvenience. Appearance is worn. See photo 19.

Recommendation: Complete Renovation
Priority: Category 4
Estimated Cost: $65,000.00

Our general impression is that the rooms function well, although the appearance is beginning to get worn and the fixture counts seemed low, especially at the Basement level. The single-user bathrooms at the lower level create an inconvenience if more than one person needs the facilities at a time. The Basement bathrooms do not have the door clearances as specified by the handicap code therefore power door operators are required.

An analysis of the Plumbing Code indicates that the current fixture count is low. If one assumes the following approximate number of occupants, the fixture requirements could be calculated.

Floor	Use	# of occupants
Basement	Offices	approx. 30 occupants
First Floor	Offices	approx. 30 occupants
Second Floor	Offices	approx. 30 occupants
Alderman's Chamber	Offices	approx. 100 occupants
Third Floor	Offices	approx. 30 occupants
Total:		**approx. 220 occupants**

Assuming the split is 110 female / 110 male, the required fixture count would be as follows:

Current*	Required
Female: 5 toilets, 4 sinks	Female: 6 toilets, 3 sinks
Male: 3 toilets, 1 urinal, 3 sinks	Male: 4 toilets, 1 urinal, 3 sinks

*includes all bathrooms at Basement, First and Second floor levels

There is no apparent *requirement* to undertake anything other than minor repairs to the bathrooms at this time. However, because of the deficit of toilets for both genders, the general appearance of the bathrooms, lack of ventilation and other convenience issues, we highly recommend a renovation of the Basement and Second Floor bathrooms, with priority being given to the Basement.

13. CODE COMPLIANCE

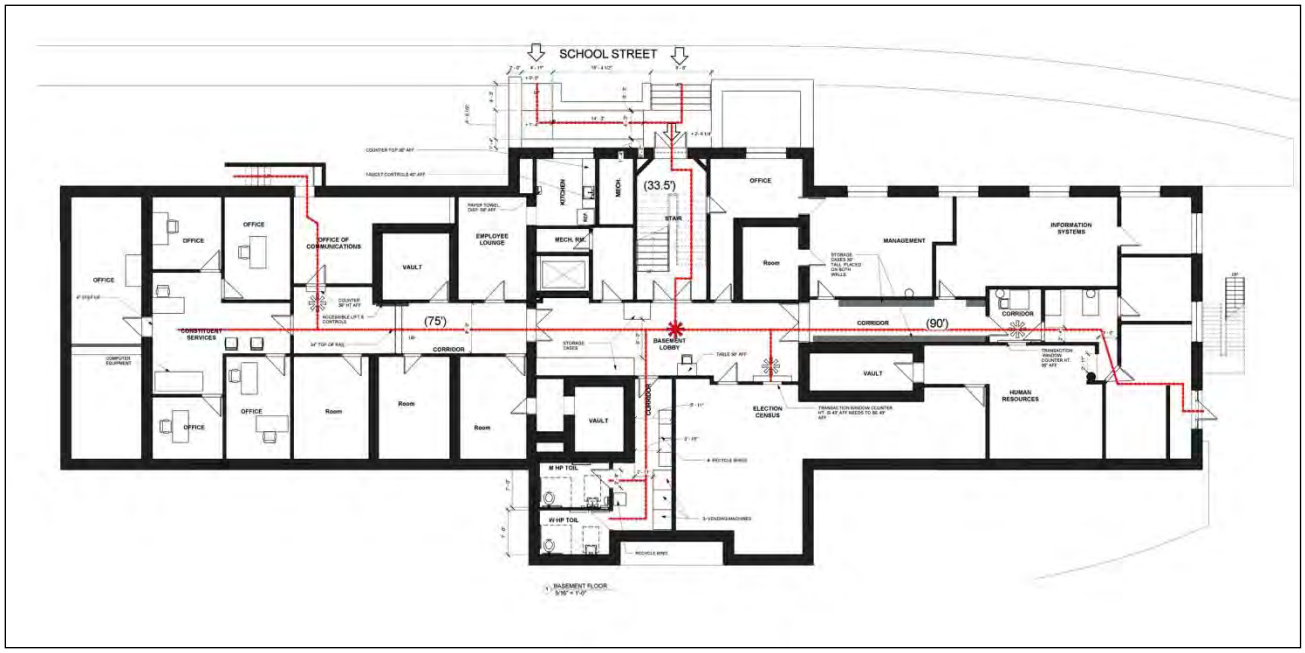
The original construction and subsequent additions and renovations to the Somerville City Hall were constructed in compliance to the building codes in affect at the time. Since the primary purpose of the building has not been modified since 1872, the facility is grandfathered to the previous codes. However, as renovations are implemented those modifications need to comply with the current codes and standards.

Additionally in accordance with the Massachusetts supplements to the International Existing Building Code (IEBC) renovations and improvements to existing buildings are classified in one of three different levels, each level has different requirements for bringing up the facility to current standards, specifically relating to structural upgrades, energy improvements and fire protection system.

Based the existing conditions, the facility as it currently stands, is grandfathered from requiring building code improvements. However, as renovations and improvements are performed on the facility, the International Existing Building Code (IEBC) requires code upgrades on a sliding scale.

Even though the current facility is grandfathered from the existing codes the following deficiencies were identified and should be addressed with subsequent renovations

Basement Circulation, Means of Egress, Stairs & Elevator.



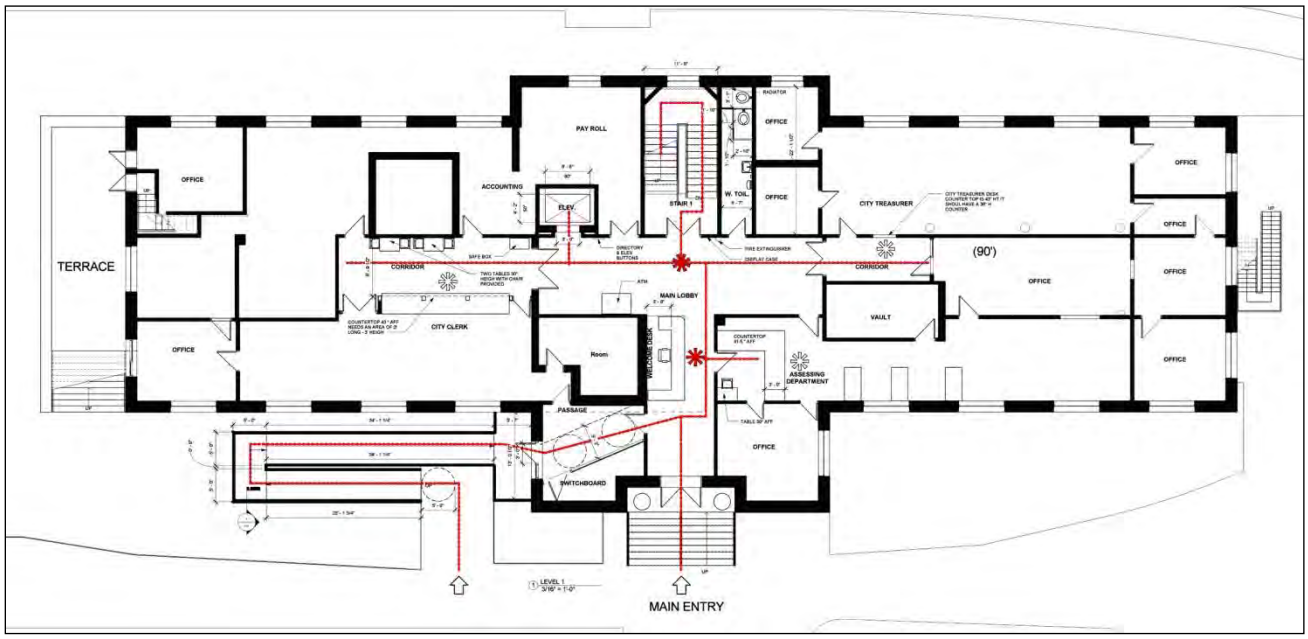
Basement Floor Plan

There are three means of egress from the basement floor to the exterior, the exit door from the office of Communication in the south wing, the exit at Human Resources department in the north wing and the monumental Stair 1. The monumental Stair 1 does not qualify as a rated means of egress because the partitions separating it from the lobbies at every floor are not rated. Some of the exits are through adjoining spaces which will need to remain unlocked if used as such.

An exit sign indicating exit through the communication office in the south wing. In the North wing there are storage boxes in the public corridors, in the Human Resources Corridor the dimension is reduced to 4'-7" because of the storage boxes. The width of the corridors should be kept to 5'-0" to allow two wheel chairs to pass each other. The exit sequence at the human resources corridor is confusing, after the exit sign you have to go through three sets of doors and the exit door is located within a currently occupied office.

Recommendation: Clarify egress exits and remove boxes and equipment that is interfering with egress path.
Priority: Category 1
Estimated Cost: None

First Floor Circulation, Means of Egress, Stairs & Elevator.

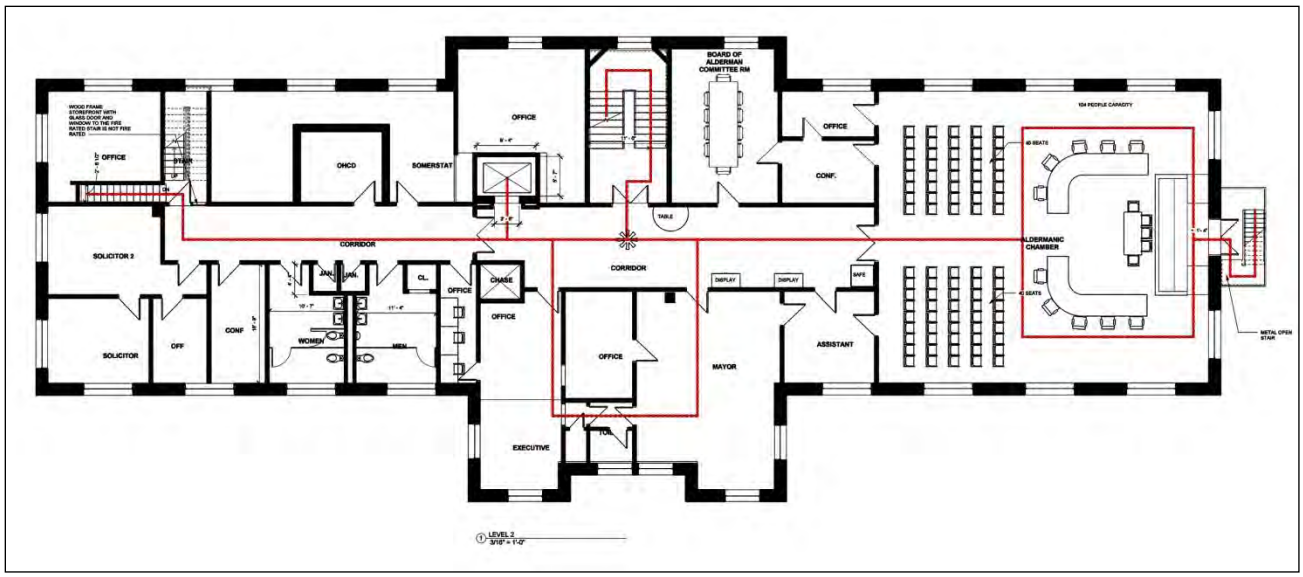


First Floor Plan

There is not a second means of egress from the north or the south wings on the first floor. In order to exit from any of the departments is necessary to return to the Main lobby to find your way out through the main door. The passage in front of the switchboard coming from the accessible ramp has furniture obstructing the mandatory 32" clear width of the door.

Recommendation: Since neither the south or north wing exceed 50 occupants an additional egress form these spaces is not required.
Priority: None
Estimated Cost: None

Second Floor Circulation, Means of Egress, Stairs & Elevator.



Second Floor Plan

North Wing Second Floor

The second floor has two separate means of egress besides the monumental Stair 1. The aldermanic Chambers located in the North Wing can accommodate more than 100 occupants, requiring two means of egress. The second means of egress from the chamber is located behind the stage wall. There are two risers of 8” each and no ramp provided. There is an exit sign provided.

The exit doors open into an exterior open metal riser stair.

Recommendation: The exterior metal stair is very unsafe and does not meet current building code and ADA requirements. The best solution would be to replace the existing fire escape with an enclosed staircase on the exterior of the existing facility. Since the facility is historic, the stair addition must be mindful of respecting the current building aesthetics and proportions.
Priority: Category 4
Estimated Cost: $60,000.00

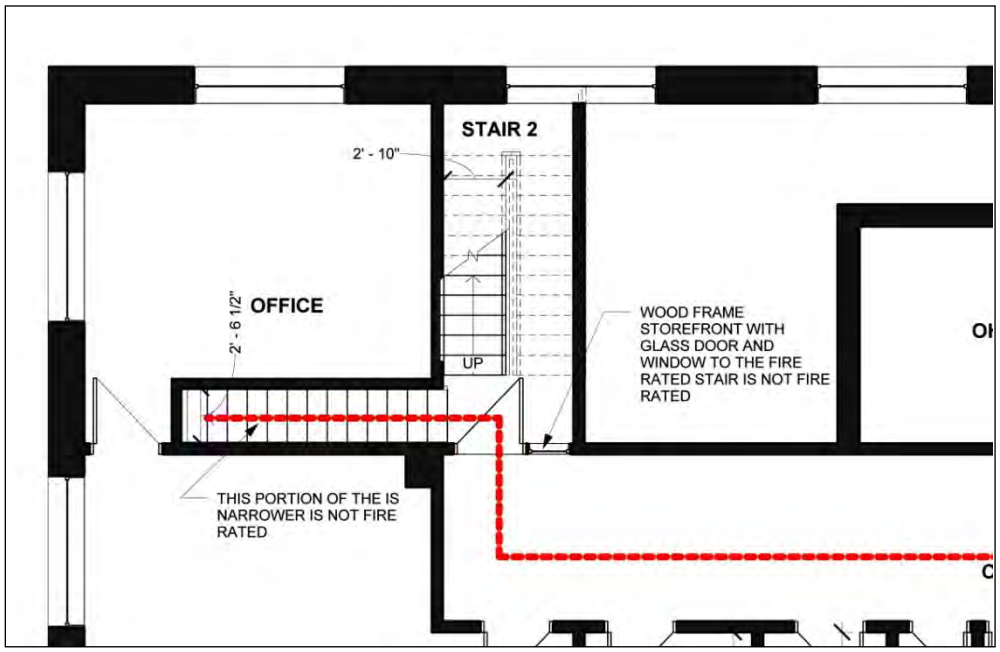
South Wing Second Floor

There is a second mean of egress in the South wing. The door takes you to Stair 2 and outside. Both the door and window into the stair shaft are not rated and compromise the rating of the stair shaft.

Stair 2 , 2nd Fl.

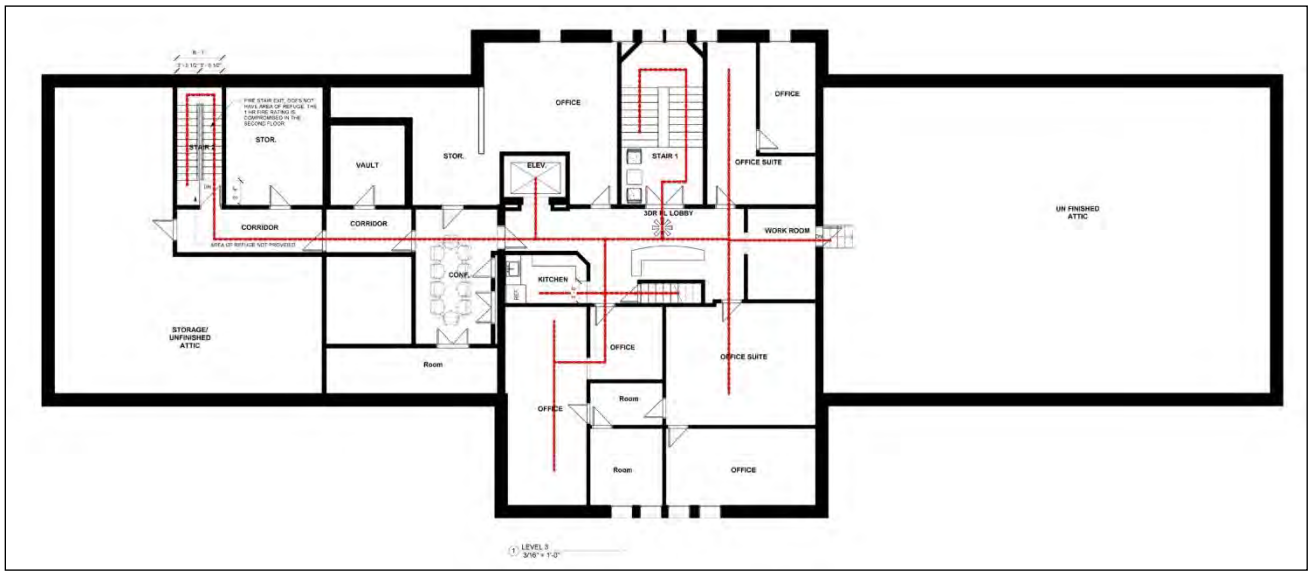
The areas we observed that are in need of repair include: Egress from the third and second floor is from Stair 2. The fire rating in the shaft is compromised at the second floor because the doors and the sidelights in the rated shaft are not 1 hour rated.

Recommendation:	Replace the existing door and side windows into the Stair 2 shaft at the 2nd Floor.
Priority:	Category 4
Estimated Cost:	$20,000.00



View of Stair 2 Second Floor

Third Floor Circulation, Means of Egress, Stairs & Elevator.



Third Floor Plan

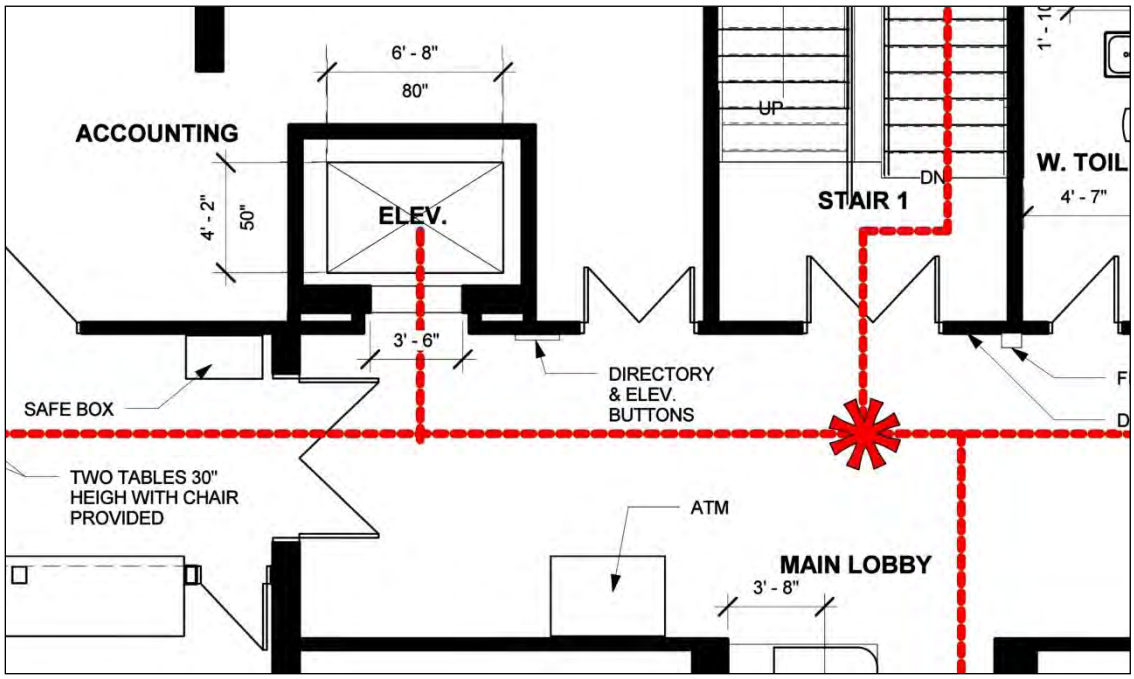
Area of Rescue Assistance

The facility does not have an area of refuge. 521 CMR has an Exception: *Areas of rescue assistance* are not required in an existing buildings undergoing alterations, remodeling, or reconstruction.

AAB **521 CMR 20.12** recommends at least two spaces but not less than one area of refuge needs to be 30”x 48” measured between the handrails.
There needs to be a 2 way communication System located in the area of refuge. A signage designating it as area of refuge, and the international signage of Accessibility. The area of refuge need to be located in a 1hr fire rated stair shaft. It is our recommendation to modify Stair 2 top landing to add an area of refuge.

Recommendation:	Leave as is since there is an exception in the code.
Priority:	None
Estimated Cost:	None

Elevator



View of existing elevator at the 1st Floor

Existing elevator cab is 50" x 80"and does not meet the size requirements for an accessible cab. However, in existing buildings, where existing shaft configuration prohibits strict compliance with the building code, the code allows for a cab to be the maximum size allowable to fit within the existing shaft. As long as the inside car area is no smaller than 48 inches by 48 inches, wall-to-wall and wall-to-door.

Recommendation:	Leave as is since there is an exception in the code
Priority:	None
Estimated Cost:	None

Monumental Stair 1

Stair 1 is the main monumental stair and the only means of egress from the second and third floor, with the exception of the open metal stair which provides egress from the Aldermanic Chamber. Stair 1 has doors in every floor that open to lobbies and are kept open. The doors, storefront and glazing are not 1 hr. fire rated. For this stair to properly serve as a means of egress the walls, doors, and frames need to be renovated to provide a 1-hr rated enclosure.

There are two ways of accomplishing this. Either modify the existing walls between the stair and the lobbies in every floor or to build a stair tower located in the North Elevation to replace the current open metal stair. These will provide a rated means of egress from the second and third floor.

Recommendation: Modify existing doors and walls to comply with rating requirements
Priority: Category 4
Estimated Cost: $24,000.00

CODE TRIGGERS

In addition to the building deficiencies identified by the building evaluation, CDR Maguire also assessed specific thresholds that trigger more involved and complex renovations to the existing facility. Some of these thresholds are percentage of construction costs as they relate to the building value, while others depend on the amount of the extent of work performed over a percentage of the building.

Building Code:
The Massachusetts Building Code and the International Existing Building Code (IEBC) requires the implementation of the current structural requirements and fire suppression systems on a sliding scale with full implementation when 50% of the aggregate floor area is renovated.

Structurally this includes but not limited to evaluation of design gravity loads, lateral capacity, egress capacity, fire protection system, fire resistive construction, interior environmental, hazardous materials and energy conservation.

Level 1 Alterations – Include the removal and replacement or the covering of existing materials, elements, equipment or fixtures using new materials elements or fixtures.

a. Structural assessment of roof loads, impacted by roof replacement and additional roof top equipment
b. Review of existing Means of Egress
c. Only new materials and finishes need to comply with Energy Code.

Level 2 Alterations – include the reconfiguration of space the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

a Comply with the requirements of Level -1
b. All new work shall comply with building code
c. Existing vertical openings shall be enclosed in rated enclosures

e. Interior finishes within corridor and exits of the work area need to fire retardant

If work area exceeds 50% of building area.

a. All interior finishes within corridors and exists need to be fire retardant
b. Corridors and doors need to be rated
c. Automatic sprinklers
d. Door hardware assessment and upgrades
e. Structural evaluation of gravity and lateral loads

Level 3 Alterations – Applies where the work area exceeds 50% of the aggregate area of the building.

a. Facility needs to comply with Levels 1 and 2
b. Seismic evaluation and upgrades of existing structure

Handicap Accessibility:
According to the MAAB and ADA reasonable accommodations must be made to provide access to and within the existing facility. Currently the facility complies with this requirement, however as building improvements and renovations are implemented there are several thresholds that trigger greater accessibility improvements.

a. If the work performed is limited to less than $100,000, then only the work being performed needs to comply with the handicap requirements.

b. If the work performed is $100,000 or more, then in addition to the work performed, it would be mandatory to comply with the handicap requirements, as well as to provide an accessible public entrance, accessible toilet room, drinking fountains and telephone. General upkeep will not trigger this requirement unless it exceeds $500,000.

c. When the work performed exceeds 30% of the full and fair cash value of the building, then the entire facility is required to be brought up to current standards.

d. Phased construction is calculated on 36 month time frame.

Historic Buildings
The Somerville City Hall is listed in the historic building registry, Reference # 35665. Consequently under the appropriate state and/or local laws it may be granted a variance by the Board to allow alternate accessibility. If a variance is requested on the basis of historical significance, the Massachusetts Historical Commission may request a copy of the proposed variance request and supporting documentation to substantiate the variance request and its effect on historic resources.

A written statement from the Massachusetts Historical Commission is required with the application for variance.

RECOMMENDATIONS AND PROJECT SCHEDULE

It would be most advantageous to perform all the work recommended in this report under a single contract. The cost for all the work is estimated to be approximately $4.2 million, which would generate a considerable amount of interest and competitive pricing. The mobilization cost for a single project would be far less than the multiple mobilizations required for several smaller projects. In addition, the administration and cost of preparing and bidding a single set of Construction Documents would also cost less than having multiple Contracts and sets of Construction Documents.

That does not mean that the work would all have to occur simultaneously. It would be most advantageous to phase the exterior work in clement weather, and interior work in inclement weather. Therefore, our recommendation is to perform all exterior work in the summer and fall of 2016, and all interior work in the winter and spring of 2016-17. The bathroom work would also have to be phased to maintain at least one bathroom in operation for each gender at all times.

If it is not possible to perform all the work under a single contract, then items which impact life safety or building integrity, such as exterior ramps, steps, repointing and exterior painting must be given the highest priority, improvements of a more functional nature, such as window repairs and the attic expansion would be given intermediate priority, and improvements that are primarily aesthetic in nature, such as the bathroom renovations and interior painting would be given the lowest priority.

COST CONSIDERATIONS

The associated construction costs per task is based on today's dollar value. They are derived from historical data gathered from past and current projects, Means Construction Cost Guide as well as past reports performed for the Somerville City Hall. The estimates do not take inconsideration savings if projects are grouped together nor do they take in account relocation costs to move occupants during renovations.

BREAKDOWN OF TASKS

To assist the City of Somerville to make an informed decision on what building related issues need to be performed and the associated time period for the repairs, we have subdivided the construction costs into four categories, identified as:

Category 1.

- Equipment or systems that are not presently functioning and require repair or replacement to bring to a functioning state, or
- Equipment or systems highly likely to fail in the upcoming year and require repair or replacement to mitigate a disruption to the buildings use.

Subcategory	Amount
Replace sealants, repair steps and paint railings	$8,000.00
Remove and replace damaged concrete	$7,000.00
Prep and paint wood trim	$325,000.00
Replace sealants	$9,000.00
Replace louvers	$8,000.00
Replace/repair windows	$150,000.00
Replace windows in clock tower	$6,000.00
Paint doors and adjust hardware	$11,000.00
Patch slate roof	$8,000.00
Repair damaged copper coping	$14,000.00
Cyclic maintenance (per year)	$5,000.00
Repairs to curb ramp and sidewalk	$5,000.00
TOTAL	**$556,000.00**

Category 2.

- Life/safety issues that should be addressed immediately.

Subcategory	Amount
Repair damaged fire escape	$22,000.00
Replace damaged cross over roof stair	$5,000.00
Replace stair treads and rotting floor at cupola	$6,000.00
Install railings at stairs and provide ladder to clock tower	$5,000.00
Replace louvers	$8,000.00
TOTAL	**$46,000.00**

Category 3.

- Equipment or systems likely to fail in 1-5 years that are recommended for repair or replacement based on an estimation of life using the equipment or system´s current state of wear.

Subcategory	Amount
Replace retaining wall	$28,000.00
Replace steps, sidewalk and railings	$42,000.00
Provide new railings, Repair steps	$16,000.00
Repair patio	$21,000.00
Repoint North wing brick walls	$170,000.00
Repoint South and West granite walls	$12,000.00
Clean masonry	$3,000.00
Apply breathable water repellent	$36,000.00
Replace flat roof	$60,000.00
Replace clock	$12,000.00
TOTAL	**$400,000.00**

Category 4.

- Equipment or systems likely to fail within 5-10 years that are recommended for repair or replacement based on an estimation of life using the equipment or system´s current state of wear.

Subcategory	Amount
Attic Renovations	$300,000.00
HVAC	$900,000.00
Electrical	$450,000.00
Plumbing	$260,000.00
Fire Protection	$156,000.00
Renovate Kitchenette and reception desk	$30,000.00
Renovate Basement Bathrooms	$50,000.00
Renovate First Floor Bathroom	$50,000.00
Replace fire escape with enclosed stair	$60,000.00
Modify Stair #2	$20,000.00
Modify Monumental stair	$24,000.00
TOTAL	**$2,300,000.00**

APPENDIX A - Glossary of Acronyms and Terms

Glossary of Acronyms and Terms

ADA	American with Disabilities Act
MAAB	Massachusetts Architectural Access Board
IEBC	International Existing Building Code
OPM	Owner's Project Manager
EPDM	Ethylene Propylene Diene Monomer
PVC	Polyvinyl-Chloride
VCT	Vinyl Composition Tile
CMU	Concrete Masonry Unit
DX	Direct Expanse
VAV	Variable Air Volume
H&V	Heating and Ventilation
PCB	Polychlorinated Biphenyls

APPENDIX B - Photographs

Photo 1 - Sealant is badly deteriorated at granite steps of Main Entry. Handrails are scratched and rusting. Painted columns, window and door surrounds are in poor condition.

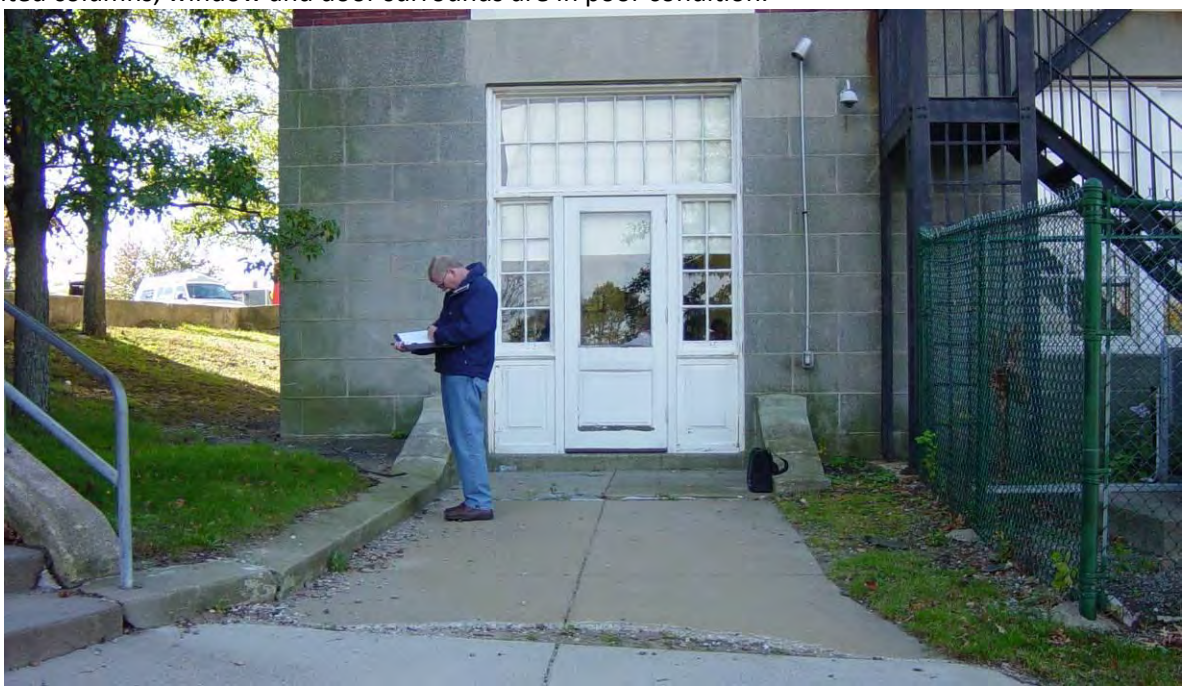


Photo 2 - Run-off flows around northeast corner of building. Sidewalk and curbs are badly cracked. Fire escape is rusty and needs painting and repairs.

Photo 3 - Concrete retaining wall is beginning to lean, but not showing signs of imminent failure.

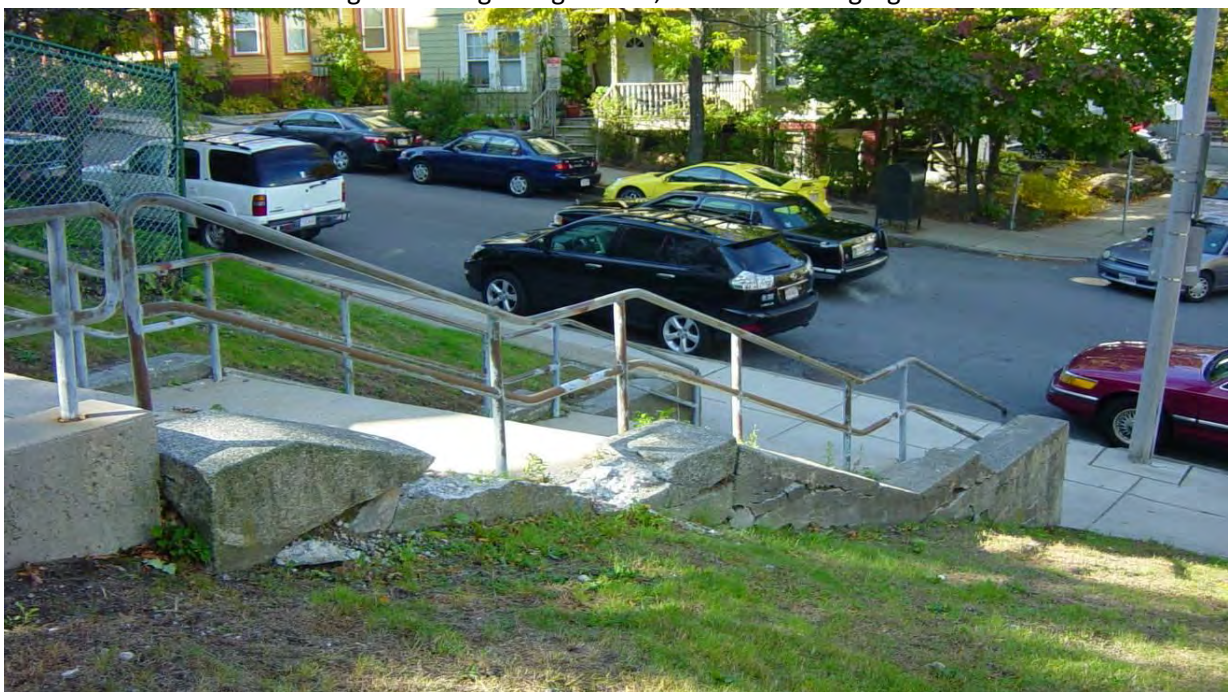


Photo 4 - Concrete walls are badly cracked at staircase. Railings are rusting.

Photo 5 - Treads slope downhill, creating a serious slip hazard when ice is present.

Photo 6 - Ramp to basement does not meet Accessibility Code (MAAB). Ramp is too narrow and railing profiles do not conform. Lamp posts are loose.

Photo 7 - Steps and railings are damaged. Exterior doorways have worn finishes and hardware, typical.

Photo 8 - Riser at bottom step is too high. Build up grade below steps to make bottom riser equal to others.

Photo 9 - Terrace waterproofing is failing, causing water and tar leakage at offices below. Moss and plant growth is seen and should be removed for proper function of terrace drains. Some deterioration of the cast stone guardrail was seen.

Photo 10 - Terrace pavers need to be removed to clean out organic debris, which is clogging the drains. Some pavers are cracked and need to be replaced. Drain pipes need to be insulated to prevent sweating.

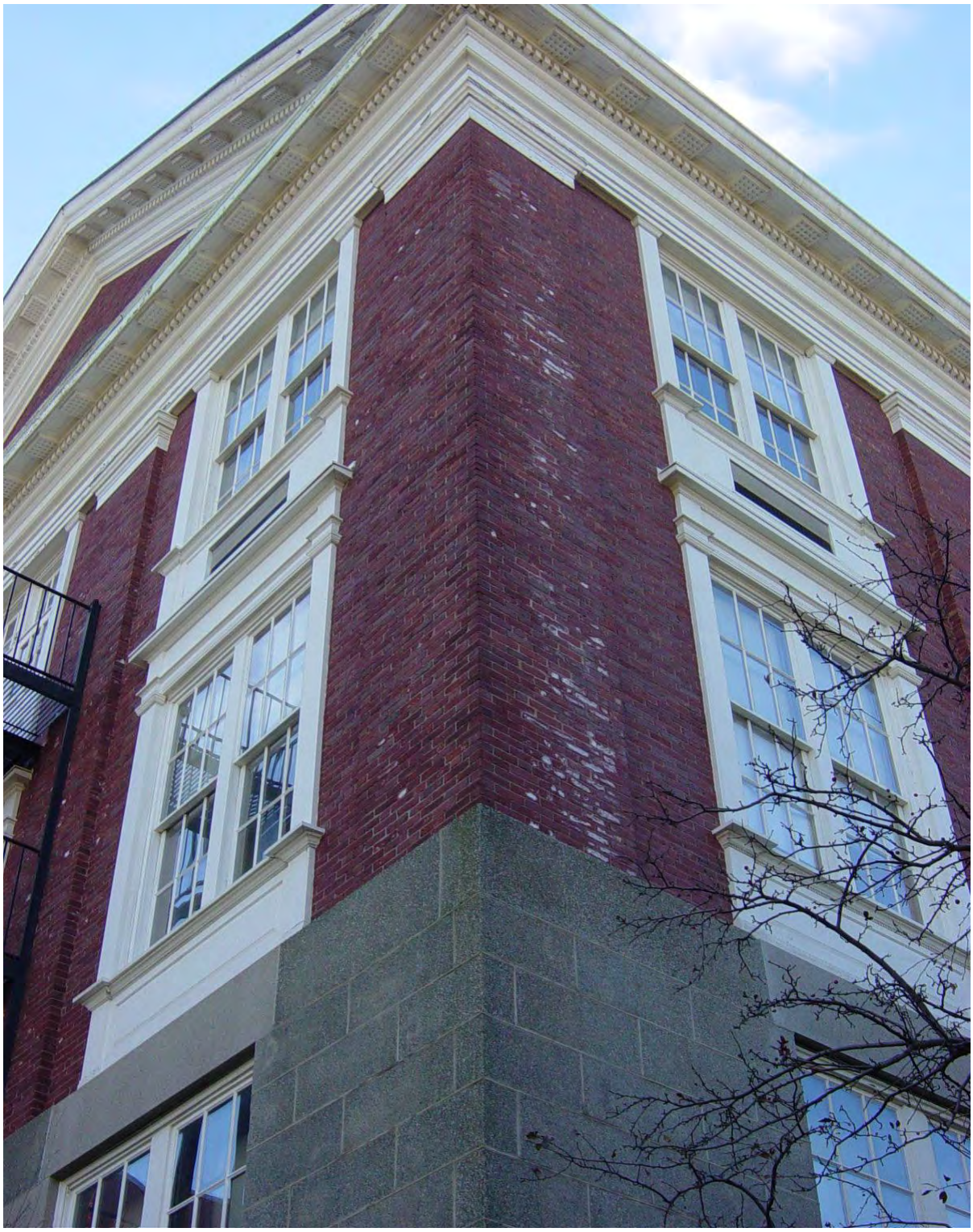


Photo 11 - Brick walls, granite base and building mortar are in good condition. No settling or cracking of masonry was seen. Due to weather, the northwest corner of building showed the most deterioration to the

mortar. The grilles, seen below the Second Floor windows in the Alderman's Chamber, let in wind-driven rain, causing water to drip in the offices below.

Photo 12 - This photo contrasts brick that has been re-pointed, on the right, with brick that has not been re-pointed, on the left. The grout on the left is very porous and deteriorated, letting in water which in turn leads to cracking of the brick and deterioration of paint and plaster on the inside surface.

Photo 13 - Paint at wood cornices and other wood trim is peeling, in some cases badly. Some copper downspouts have split, causing large amounts of water to spill down the face of the building. Below this downspout, which is adjacent to the Accounting Office, water has damaged the interior wall surface.

Photo 14 - Windows are single hung, wood sashes and frames retrofitted with insulated glazing and weather stripping. The condition of the windows is good, but the sashes have excessive play, some weather stripping is missing, the glazing compound is cracking, and painting is needed.

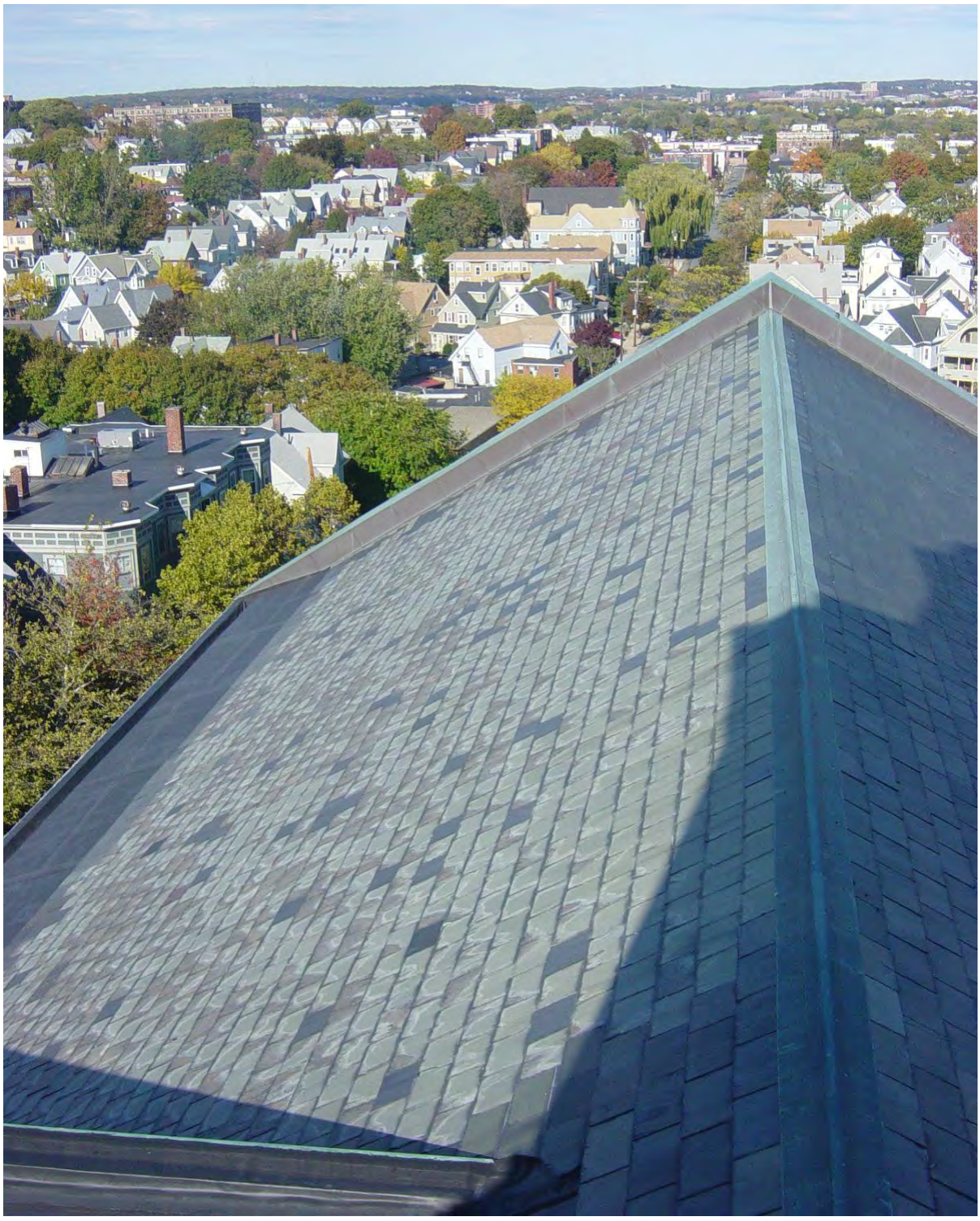


Photo 15 - Slate roofs are in good condition. A few cracked and missing slates were seen. Built-in EPDM lined gutters appear in good condition. The copper ridge appears to be in good condition.

Photo 16 - Several areas of the copper coping are damaged and in need of repair.

Photo 17 - The flat EPDM roofs are approximately 19 years old and in fair to good condition. Some roof drains are damaged and in need of repair.

Photo 18 - Basement bathrooms are single-user, causing inconvenience. Rusty pipes and radiators, mismatched accessories, unpleasant lighting and deteriorated floors give unattractive appearance.

Photo 19 - Second floor bathrooms are well maintained. Appearance is somewhat worn and mismatched.

Photo 20 - Existing south attic has exposed brick wall, window and roof timbers. Steam pipes obstruct space.

Photo 21 - Attic is currently crammed with old files and drawings. Tension rods and braces obstruct space.

Photo 22 - The clock tower is clad in painted clapboard, wood trim and copper roofing. It has three floor levels, the lowest of which exits onto the flat roof. The crossover stairs on the right are used for accessing the west roof and mechanical equipment. It is missing treads, poorly built and hazardous. Replacement is recommended.

Photo 23 - The clock tower paint is peeling badly. Some wood trim is loose and in need of repair. Windows are in very poor condition. They have not been fitted with insulated glazing as was done elsewhere. Non-historic storm windows have been shattered due to high winds. The copper roofs appear to be in good condition, and no water was seen leaking from the steeple in moderate to heavy rains.

Photo 24- The stairs ascending the clock tower are very steep, with loose, cracked treads and inadequate railings. Buckets are propped to catch leaks.

Photo 25 - Ladder to clock room is unsafe, some rungs are loose and it does not meet OSHA standards. Walls and floors are water damaged. Windows are rotted and leak. Floors are littered with debris.

Photo 26 - Timber frame and tension rods appear to be in good condition. Some rot is seen at the roof planks. It is not clear if this is recent, and may be due to condensation rather than leakage. No roof leakage was observed in moderate to heavy rain and winds.

Photo 2 - The clock is not functioning. Deteriorating glazing compound around dial may leak water.

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